merican

Save Those Airports

THE CAA is now conducting a hurried survey all civil aviation facilities that could be utilize under general mobilization for war.

It won't have to look far to find, first, there are a great many facilities that should get be utilization than they were given in World War

and second, that some emer gency action must be take to keep more airports and airfields from closing up.

The CAA lists about 6,500 airports of all classes in its latest report on July 1, but AMERICAN AVIATION'S recent check of one state.

North Carolina, revealed that a large number of airports listed by CAA as being open are, for all intents and purposes, closed. Some have even been ploughed under.

If our own survey of one state is typical of the nation as a whole, CAA is kidding itself with its 6,500 figure. A more realistic figure would be in the neighborhood of 4,000 airports and airfields partially or completely open. Many of those closed for operations are in existence physically but it doesn't take long for any airport to deteriorate into uselessness with lack of maintenance.

The CAA has called a special meeting of its Aviation Development Advisory Committee for August 21 to work out plans for civil aviation in the case of an extreme emergency. We think the airrort problem should be at the top of the agenda.

If a nation in these days needs anything, it nee is available airports. Plenty of them, from small strips on up. It seems to us that the problem of airpor abandonment is sufficiently serious that the CA will have to undertake a program of "minimum mai tenance," with Federal funds, to keep abandoned airy rts on a stand-by basis. It is far less expensive to raintain what we have than to have to build new field from scratch. The investment to date in airpor is big enough to justify minimum maintenance rmal times. It is all the more important to mai tain these fields for a possible emergency.

In addition to airports, however, the CAA wor have to look far to find a tremendous military asse in the thousands of civil airplanes and the thou ands of fixed base facilities. Last time civil 2 SINED avia on was pinched and cramped almost into suffoca on while common carrier transportation was (Turn to Page 8)



UAL Veteran Promoted

Robert E. Johnson, 21-year veteran of the aviation industry, has been named to new position of director of public relations and advertising and assistant to the president of United Air Lines. Formerly director of advertising, he assumes the duties of Gail Borden, who resigned as public relations director. Johnson began his aviation career in 1929 with Boeing Airplane Co. and has been associated with United since 1931.

Industry Boom Begins—\$7.5 Billion to

Policy Reversal—CAB Gives Seament to

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IT TAKES PENETRATION TO BRING THEM IN SAFELY!



HERE'S PENETRATION!

L-M's famous 180,000 candlepower high intensity runway light with controllable beam.

The beam is controlled to eliminate glare and halo. That makes possible the extremely high intensity—higher by far than any other runway light. Under near-minimums, every foot of distance is vital. More candlepower means greater penetration. The pilot sees the lights at a greater distance. More pilots make successful landings. That's all there is to it!

Second article in a series on the basic principles of HIGH INTENSITY

RUNWAY LIGHTING

A pilot coming in for a landing under nearminimum conditions needs every available foot of visibility. Any runway light that adds ten per cent to the distance at which the pilot can see it greatly increases the chances for a successful landing.

But to get this extra penetration takes far more than a proportionate amount of candlepower. The reasons for this are highly technical, but several examples will demonstrate the facts:

At ½-mile ground visibility, a runway light of 20,000 beam candlepower has a cockpit visibility of about 970 feet. Under the same conditions a 100,000 candlepower beam will be visible at about 1130 feet—16% further. Five times as much light gives only ½ more distance!

At ¼-mile ground visibility, the 20,000 candlepower beam will penetrate about 1550 feet. The 100,000 cp beam will reach about 1950 feet—25% further.

At ½-mile, the figures are 2500 and 3300 feet, respectively, a 33% increase for the higher candlepower.

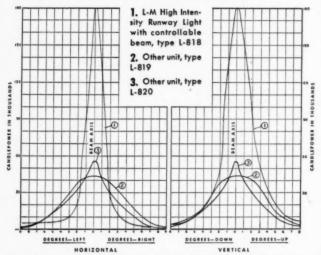
That is why L-M runway lights employ 180,000 beam candlepower, concentrated to give the maximum penetration in the region of guidance, and controlled to eliminate glare and halo.

L-M high intensity runway lights were designed by L-M's pilot-engineers—men who know lighting, and also know the problems in making a landing, and the vital importance of every possible additional foot of visibility.

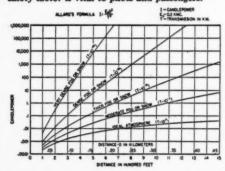
Want more information—technical or otherwis?

A great deal more information is available. Ask the E-M
Field Engineer for complete information, or write A port
Lighting Division, Line Material Company, East Strudsburg, Pennsylvania (a McGraw Electric Compan)
Division).

WANT TO GET TECHNICAL?



• Candlepower distribution curves, high intensity runway lights. (From CAA Drawing No. 741.) L-M lights have by far the highest candlepower, and the greatest penetration. Normally operated at 1% to full intensity, their extra power is most important under near-minimums when the extra safety factor is vital to pilots and passengers.



• Candlepower needed to penetrate fog of various densities to given distances—for darkadapted eyes, according to Allard's Law. Asatmospheric density increases, required candlepower increases far more rapidly than "the square of the distance."

LINE MATERIAL... Airport Lighting

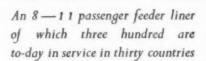


AU

DOVE

2 de Havilland Gipsy Queen engines of 345 b.h.p., de Havilland 3-blade feathering-reversing propellers

C.A.A. have indicated their readiness to validate the British Certificate of Airworthiness for the Dove with Gipsy Queen 70/4 engines



For the same range and at the same speed the Dove carries more payload than any comparable aircraft—and far more economically. It has remarkable servicing accessibility and facility



DE HAVILLAND

Sales and Service Agents for North America: The de Havilland Aircraft of Canada Ltd., Toronto, Ontario. Designed and built by The de Havilland Aircraft Co. Ltd., Hatfield, England. Builders of the Comet airliner and its Ghost jet engines. Associated Companies in Australia, Canada, South Africa and New Zealand. Distributing, servicing and spare parts agencies throughout the world.

AUGUST 15, 1950

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PAA-AOA: At press time Aug. 8 the Federal court at New Haven, Conn., had not yet issued its decision whether it will or will not review the procedural steps involved in the proposed acquisition of American Overseas Airlines by Pan American World Airways. Three judges heard five hours of argument on July 26 and a decision had been expected within a few days. Both TWA and James Landis, representing a group of AOA employes, asked the court for a stay and a review. Meantime the parties to the acquisition have been unable to go ahead with the merger.

National vs. CAB: CAB provided National Airlines with the top headache of the year. On Aug. 2 it approved by 2 to 1 vote National's daylight DC-6 coach flights between New York and Miami for a \$58 one-way fare. Service was to start Aug. 5, and CAB gave assurances to National that everything was in the clear. At noon on Aug. 4, however, CAB held a hurried meeting and reversed itself by a 2 to 1 vote. Meantime National had advertised the service widely. National attorneys then made two determined efforts to obtain a stay of the order but after arguing with two different Federal judges until midnight on two successive nights, both judges said they were without jurisdiction in the matter. At press time National was still searching for legal means to invalidate the last CAB action.

Western vs. CAB: Added to its many other court troubles, CAB got another one on Aug. 5, when the Circuit Court of Appeals for the 9th Circuit in San Francisco directed the CAB to show cause why further procedural steps in pending west coast feederline cases should not be stayed pending determination of a petition for review filed by Western Air Lines. Western obtained the show cause order which is to be argued Aug. 14. Meantime the CAB hearing on the proposed merger of Southwest Airways and West Coast Airlines, due to begin, was postponed. The CAB has voted 2 to 2 on the Western petition for consolidation.

Freight Suffers: When military took airline C-54's, air freight was dealt a serious blow. Eastern Air Lines has discontinued all-freighter service. American has only 6 C-54's in service (instead of 13) and has discontinued service to four cities. Northwest, Capital, and United have had to curtail service. Slick and U. S. Airlines, both using C-46's, are reaping benefits and all other twinengined cargo service is functioning as usual. But just at a time when air freight outlook was optimistic, it is facing a fight for survival. More freight is being placed on passenger planes than ever before.

HST Soothes O'Connell: President Truman apparently decided he hadn't treated Joseph J. O'Connell, Jr., very well in accepting his resignation as CAB chairman very suddenly in July. So he invited Mr. O'Connell to the White House for a formal visit. The former chairman spent twenty minutes with the President and would only say "we had a very pleasant chat."

AF Using Civilian Schools: Some 1,350 Force cadets will be given basic training by civilian flight school contractors soon to be selected by AF. Standby AF bases and civilian contract flight schools are now being surveyed. After selection of sites, Air Materiel Command, Wright-Patterson AFB, Dayton, Ohio, will announce specifications and criteria of eligibility for bidding by flight schools. Contracts to be let should total about 229,500 flight hours, since each cadet receives approximately 170 hours in basic flight school.

(Turn to Page 6)

THE AIR INDUSTRY'S PIONEER INDEPENDENT MAGAZINE

Vol 14 No. 6



August 15, 1950

1025 Vermont Ave., N.W. Telephone-STerling 5400 Washington 5, D. C. -AMERAV

odes AIRPORTS and AIR CARRIERS

Editor and Publisher WAYNE W. PARRISH

Executive Editor ERIC BRAMLEY

News Director LEONARD EISERER

Editorial Associates

WILLIAM D. PERREAULY (Technical Editor) RICHARD G. WORCESTER (Design-Engineering) KEITH SAUNDERS GERARD B. DOBBEN BARBARA J. WARD

JAMES J. HAGGERTY, JR. (Military) (Military)
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(West Coast)
Daniel S. Wentz II
Dallas R. Long
William V. Henzey

Director of Advertising: Stephen R. Kent Business Manager: John H. Poole

American Aviation is published 1st and 15th of each month by American Aviation Publications, Inc., Washington, D. C. Frinted at the Telegraph Press, Harrisburg, Pa. Subscription rates for United States, Mexico, Central and South American countries—\$3.00 for 1 year; \$5.00 for 2 years. Canada—\$3.50 for 1 year; \$6.00 for 2 years. All other countries—\$4.50 for 1 year; \$6.00 for 2 years. Entered as Second Class matter in Washington, D. C., and Harrisburg, Pa. American Aviation Publishing Corporation: American Aviation Publishings

and Harrisourg, Pa.
Publishing Corporation: American Aviation Publications,
Inc., Wayne W. Parrish, president: Albert H. Stackpole,
Eric Bramley, vice presidents: E. J. Stackpole, Jr., secretary-treasurer; John H. Poole, assistant secretary-

West Coast Office: Park Central Building, 412 West Sixth St., Los Angeles 14, Calif. Trinity 7997. Fred S. Hunter, manager

manager.
Foreign Advertising Representative: United Kingdom—
Pearl, Cooper Ltd., 2-3 Norfolk St., Strand, London,
W. C. 2. Tel. Temple Bar 8111/2.
American Aviation incorporates Airports and Air Carriers,
Airports, Aviation Equipment, The American Pilot, Aviation Sales and Service, U. S. Aviation and American Airports. All rights to these names are reserved.

Other Publications-

American Aviation Daily (including International Avia-tion): Published daily except Saturdays, Sundays and holidays. Subscriptions: \$16 one month; \$180 one year. Daniel S. Wentz II, managing editor.

American Aviation Directory: Published twice a year, spring and fall. Single copy \$5.00. Marion E. Grambow, managing editor.

managing editor

Official Airline Guide: Monthly publication of airline schedules and fares. Subscriptions: U. S. A. and countries belonging to the Pan American Postal Union, Inciuding Spain and the Philippines, \$9.00 one year; Canada, \$9.50. All other countries, \$11.00. Published from editorial offices at 139 North Clark St., Chicago 2, Ill. State 2-2154. C. N. Johnson, managing editor.

Air Tariff Reports (Cargo and Passenger): Published daily except Saturday, Sunday, and holidays. Rates on re-quest. William V. Henzey, managing editor.

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Design Trends	Over the Counter41



Now comes the news that AiResearch equipment will be used to pressurize and air condition the fleet of 10 new super Constellations ordered by Eastern Air Lines. This follows closely on the heels of the announcement that AiResearch equipment will be used on the fleets of new model Martin 4-0-4's purchased by Eastern and Trans World Airlines.

As Captain Eddie Rickenbacker, President and Genral Manager of Eastern Air Lines, says, "With new engineering advancements in air conditioning and temperature control, the Super-New-Type Constellation

will become the most pleasant passenger air liner in the world to fly at any altitude..."

The AiResearch system for each airplane comprises

approximately 25 individual components, all integrated to produce and control a cabin air flow of 140 pounds of air per minute, 40 pounds more than in the #649 and #749 Constellations. Major components, which include two cabin superchargers, two turbine refrigeration units and two cabin pressure regulators, will be similar and largely interchangeable with those used in the AiResearch-equipped Martin 4-0-4.

Into the design, engineering and manufacturing of this equipment goes more than a decade of experience. Only AiResearch has this backlog of "know how" and

skilled manpower which already has created pressurizing and air-conditioning equipment for a majority of all post-war military and commercial aircraft.



BACKGROUND & TRENDS

Airlines' War Blueprint

Although National Security Resources Board isn't doing much talking, it is believed to have completed the war mobilization plan for the airlines. Plan probably provides for militarization of air routes operating into a war area. Korean situation isn't regarded as all-out war requiring militarization, and Air Force will use civil airlift on a charter basis.

On domestic transport: Government has a complete plan for setting up an agency to control all domestic transportation in an emergency, says J. Monroe Johnson, chairman of the Interstate Commerce Commission and head of World War II Office of Defense Transportation. Johnson states that he gave the plan to NSRB six months ago.

More Requisitioning Unlikely

Air Force, which has or is slated to get 60-odd scheduled and non-scheduled four-engined transports for Pacific charters, is not expected to requisition any more unless the military situation changes.

MATS Controls Pacific Charters

Military Air Transport Service has been assigned responsibility of providing necessary long-haul airlift for armed forces operating in Korean area. This means that MATS has taken over operational control of airline charters in Pacific (contracts will still be handled by Air Materiel Command, Wright-Patterson Air Force base).

Engines and Bombers

Tips on engine production and bomber superiority

came from United Aircraft Corp. recently.

Engines: Given immediate orders and priorities to back them, aircraft engine industry could triple its output by the end of the first year, rise to seven times today's level by end of second year, and reach World War II peak in three years, says H. M. Horner, UAC president. This could mean a yearly rate of 250,000 in 1953.

Bombers: Effective heavy bomber design still depends on piston engine power, with jets most effective in fighter aircraft, according to Frederick B. Rentschler, UAC chairman. U. S. has sizable piston engine lead, thus can produce better heavy bombers than Russians, he says. Russia confiscated B-29's with early Wright R-3350 engines during last war, but has only a paper knowledge of Pratt & Whitney's 3,500-hp R-4360, he explains, adding, however, that in jet field "we should not underestimate the Russians."

Scientific Manpower

Job of compiling a roster of scientific personnel has been delegated to Office of Education, Federal Security Agency, by National Security Resources Board. Office of Education will conduct inventories and make studies of nation's scientific manpower supply.

Stepped-Up Aluminum Production

Look for reactivation of aluminum production facilities. President Truman has asked \$6 million for this purpose. Money is included in \$1.1 billion requested from Congress for overall stockpiling of strategic and critical materials.

Watchdogs

House and Senate are ready to vote billions for defense but they want to know where and how it's going to be spent. Significantly, both Houses have set up "watchdog" groups. The Senate has named a committee from the Armed Services Committee to check all phases of defense effort. House Armed Services Committee went further and named specific sub-committees on: Air Force aircraft procurement, Navy aircraft procurement, guided missiles, anti-submarine warfare, radar fence, military manpower, tactical aviation, stockpiling.

A Job Open

Chairmanship of the Civil Aeronautics Board was still wide open at this writing. President Truman in July was all set to nominate James Pinkney, professor of political science at Davidson College, N. C., for the job. Differences of opinion in North Carolina political circles scuttled the move, however. At last report, there was no one at the top of the White House list—things were very indefinite, as they were in 1948 when four months were required to find a chairman. Incidentally, Paul Aiken, former Assistant Postmaster General, was evidently scratched from the list when he won the Kansas Democratic primary for nomination to the U. S. Senate. Same day he won, Truman filled his old job, appointing John M. Redding, publicity director of the Democratic National Committee.

News in Brief

(Continued from Page 4)

Smith & NSRB: C. R. Smith, president of American Airlines and industry spearhead for Air Force airlift activities in World War II, is serving for two months as a three-day-a-week consultant on transportation matters for the National Security Resources Board, reporting directly to W. Stuart Symington, chairman . . . Robert J. Smith, president of Pioneer Air Lines, has been approved by the Senate Armed Services Committee to serve as vice chairman of NSRB.

L.A.-Hawaii for UAL: The trans-Pacific certificate of United Air Lines was amended by CAB August 4 to make Los Angeles a co-terminal with San Francisco on the Honolulu route. The change permits UAL for the first time to operate direct services between L.A. and Honolulu, and is in effect until October 1, 1953. Applications of Matson Navigation Co. and Pacific Overseas Airlines for Honolulu-L.A. routes were denied.

Good Bet: In the event of extreme emergency or total mobilization for major war, it is considered likely that entire CAA federal airways system and its personnel will be transferred into the Air Force and form basis of what used to be the Army Communications Service. CAA personnel would be in uniform.

Aviation Fuel: Oil companies were given a jolt by new and urgent requests for aviation fuel by the military services. Requirements are far beyond what companies expected and unless tapered down will result in old wartime allocation system being re-established. Most of the aviation fuel refineries were converted to motor fuel purposes after the last war. Oil companies can't figure out what military has done with its ample reserves.

H-S Broadens Market: In a move to expand its field of operations to include design and manufacture of aircraft accessories, Hamilton Standard Division of United Aircraft Corp. is manufacturing an air conditioning unit for jet fighters. First order for the unit, scheduled for delivery this summer, will be for the North American F-95A.

AUG:



Completely Equipped Bates Field... One of the South's Finest!



Now BATES FIELD AT MOBILE has a new right to be proud. For the far-reaching million dollar improvement program at Bates has been completed.

A big, handsome administration building is in service. Another improvement is the resurfacing of crisscross runways. Latest scientific flying aids are installed, and there's a modern control tower. Spacious concrete and steel hangars, extensive service facilities, charter service and air taxi are all available. The sales and service staff is competent—helpful. In charge of operations is the widely known Field Manager Oscar Barney.

When you refuel and add oil at this airport you can count on the speed and efficiency of *Jack Connors Flying Service*—a good sound reason for making Bates Field your regular refueling and stopping point.

CITIES SERVICE



AVIATION PRODUCTS

New York · Chicago · In the South: Arkansas Fuel Oil Co.

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EDITORIAL

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overloaded. Any increase in military procurement (and we are now getting a hefty uplift of that) requires a lot more travel. The small airplane can provide an extremely useful auxiliary service. Corporations should use these airplanes to supplement common carrier movement.

Instead of washing out the local operators and closing up "for the duration," the local civil aviation facilities ought to be an integral part of a war economy, offering flexibility and special uses which cannot be found elsewhere. The existing fleet of civil aircraft ought to be kept in use. It should represent an auxiliary transport fleet which can fit into a war pattern very easily.

Then there is pilot training. The CAA is directing some studies along this line which could well mean a re-establishment of some kind of elementary training for a new generation of pilots. The military services will have to look far beyond their present reserves from the last war if we get into an emergency. There is no longer any question about the value of the CAA-directed pilot training in the last war. Despite criticism by the armed services, the record is clear—the CPT and WTS training did a tremendous amount of good. Today there are probably 3,000 local operators capable of undertaking a pilot training program.

CAA Administrator Del Rentzel has lost no time in picking up the ball on civil aviation facilities. We hope he is successful in integrating them with the war economy. The local airport ought to be bustling with activity in any war program, not snuffed off in idleness. Airports and their facilities need to be kept in tip-top shape.

CAB Flubs It Again

I T'S no wonder that confidence is lost in the CAB by its meandering, perambulating and ephemeral actions.

On Wednesday, August 2, the CAB voted 2 to 1 to approve a National Airlines DC-6 coach service to be instituted on the following Saturday, August 5.

Officials of National asked CAB if they should take precautions and use the phrase "subject to CAB approval" in its advertising. CAB said positively no, that this was a formal Board action and everything was cleared.

So National telegraphed 600 travel agencies, sent cables to South America, took ads in newspapers, bought a lot of radio time, sold tickets and set up schedules.

At noon on Friday, Aug. 4, the CAB changed its mind by a 2 to 1 vote. Member Adams stood by his earlier affirmative, Member Jones stood by his earlier negative, but Member Josh Lee switched.

Now we don't know whether National's proposed DC-6 coach service is right or wrong and we aren't concerned here with the merits of the case. But we are appalled by the uncertainties, the switching, and the lack of faith (and of policy) in overturning at the last minute an action on which an airline had been given full assurances to believe in.

This isn't the only time that last-minute tariff actions have proved costly and embarrassing to an airline. This isn't the only time when CAB has demonstrated that it has only a policy for the moment and none for the future.

At this writing the PAA-AOA merger case was still in court. Just the other day a restraining issue was issued by a federal court against the CAB in its Parks Air Lines certificate case. And on Aug. 5 a show cause order was issued against CAB by a federal court in San Francisco against still another case. The hot water is getting hotter.

This Is No Dream

W E DID a little wire tapping the other day and listened in on the conversation between Mr. J. C. Drinkdeep, the shipping manager for Great Northern Electric & Armaments Corp. of Bilgewater, N. J., and Ted Jones, cargo clerk of Ajax Airlines, one of the nation's scheduled transcontinental carriers which has been pushing its air freight service. The phone talk went something like this:

Drinkdeep: "Jones, I've got some rush business for Ajax. I've got a 1200 lb. super-rush supersecret shipment on our truck. It ought to be at Newark in a half hour. Now it's awfully important to get this stuff on the first plane for San Francisco. Has to be there first thing in the morning."

Jones: "I'm sorry Mr. Drinkdeep, we just can't get it out today or tonight. I can't promise anything. We've got a backlog of freight right now. And, frankly, I don't know of any other line that can take it, either."

Drinkdeep: "Look fella, this shipment is urgent. I just had a call from the Pentagon saying this stuff just has to get to San Francisco by morning. It's for the war, you know."

Jones: "Yes sir, I understand that, but you know, sir, the Pentagon just took away almost all of our cargo planes."

Drinkdeep: "Took them away! Impossible! How can anybody take freight planes at a time like this. How in hell do they expect us to ship this rush stuff if they take away the transportation. That's the stupidest thing I ever heard of. What's the matter with you guys, anyway. You've been begging for my business for three years and then when I give you something you can't carry it."

Jones: "It isn't our fault, sir. We thought air freight was pretty important but I guess those guys in the Pentagon know what they're doing. I'll do my best to get your shipment out in the next few days."

At this point our wire tapping apparatus broke down.

WAYNE W. PARRISH



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NC

Assault TRANSPORT ability



 Add one more use for the already highly versatile Fairchild Packet—its adaptability as an assault transport.

• Fairchild has just converted one C-82 for Air Force evaluation...more can be modified quickly and economically. The larger and more powerful Fairchild C-119's perform equally well in this newest assault transport assignment.

 Moving swiftly in and out of small, rough, unprepared fields—directly behind combat troops if need be—the modified Packets can handle 16,000 lbs. of payload, loading and unloading with maximum efficiency and speed. The Packet's ability to haul men and material equals its pre-eminence in dropping paratroopa and cargo.

 Only the Fairchild Packets, designed and manufactured to meet the many and complex problems of air support and supply, can so completely fill this military requirement for a versatile assault transport.

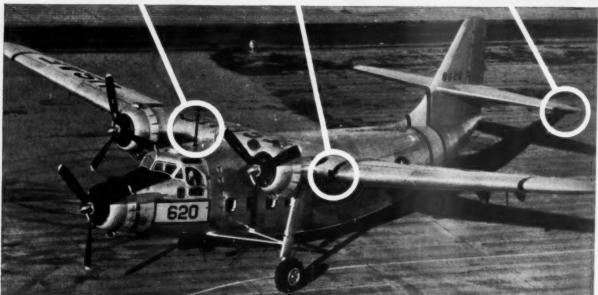


B.F. Goodrich









Electric blankets keep new Arctic plane from freezing

THIS NEW TRANSPORT, now in production for the military services, has an icy job cut out for it—rescue missions in the Arctic!

Because of the constant cold-weather operation, Northrop had to design the C-125 "Raider" against freezing at all vital points. They called in B. F. Goodrich—the leader in icing research. BFG engineers came up with the answer—an electric "blanket" made in three different shapes to solve three big icing problems!

The "blanket" is thin, tough rubber with a core of resistance wires running

through it to supply spot heat. It's used on the radio antenna (photo top left) to keep ice from forming and causing the antenna to snap off in the wind. On the air scoops (photo top center), it keeps ice from choking off the air supply. Heat furnished by BFG electric rubber on the elevator horns (photo top right), keeps them from freezing tight, insures easy control.

Fitting B. F. Goodrich electric rubber to these three widely-different shapes proved to be no great problem.

It fits curved contours like a snug, smooth glove. What's more, it's the

most efficient way to put the right amount of anti-icing heat on the right spot. It's light-weight and simple, too. Two lead wires carry the electricity, furnished by the plane's regular power supply.

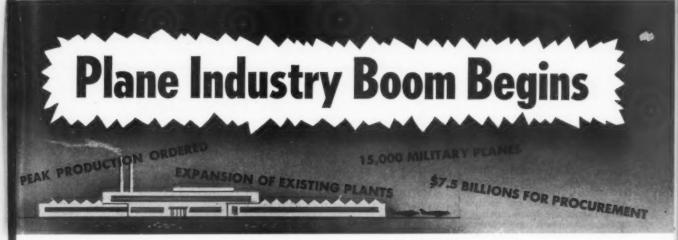
Whenever you have an icing problem, get in touch with The B. F. Goodrich Company, Aeronautical Division,

Akron, Ohio.

B.F. Goodrich

AMERICAN AVIATION

With



By JAMES J. HAGGERTY, JR.

THE AIRCRAFT manufacturing industry is coming to life again, after five years in a near-dormant

It took two years and a war to do it, but we have finally started ordering aircraft on the scale recommended by the Congressional Avia-tion Policy Board back in 1948. In fact, if Congress votes all the money that the Administration has requested for aircraft procurement this year (and it appears likely that it will), the industry will be producing aircraft at a rate far exceeding even the Board's "Plan A," long the zenith of the hopes of aircraft manufacturers and advocates or air power preparedness.

The optimistic Plan A submitted by Sen. Owen Brewster (R., Me.) and his colleagues on the Board called for an annual procurement rate of 111,000,000 airframe pounds, the amount required to sustain a 70group Air Force and a comparable program. Such a program would have required, in the current final year, contract authority for both services totaling \$4.3 billion.

\$7.5 Billion for Planes

As it stands today, assuming Cong sional approval of all of the funds requests made to date, there will be a lilable for aircraft production more tion \$7.5 billion to bring the Air Force up to 69-group strength, pro-Vide a similar expansion for the Novy and provide countries in the Mutual Defense Assistance Program with more modern aircraft. It is estimated that some 15,000 planes would be ordered under the \$7.5 bil-

lion procurement program, the large majority of which would of course go to build up our own air forces.

A total of \$6,660,000,000 has been requested for the procurement of new aircraft for the Air Force and Navy; this money will buy an estimated 150,000,000 airframe pounds. In addition, to provide MDAP countries with 1,600 new jet aircraft, about \$850,000,000 has been asked for MDAP procurement of about 25,-

000,000 additional airframe pounds. So, roughly, the Administration's requests thus far provide for a procurement program exceeding by well over 50% the most optimistic recommendations of the Brewster board.

Some of the production may be diverted to other countries. To provide supplementary facilities to help out our own industry if the scale of production is increased again, it has been suggested that European manufac-

\$7.5 Billion for New Plane Production

Air Force

Original 1951 Appropriation \$1,565,000,000 1950 Defense Production Act 2,777,300,000

\$4,342,300,000

Original 1951 Appropriation 733,600,000 1950 Defense Production Act 1,596,269,000

2,329,869,000

Mutual Defense Assistance Program

Original 1951 Appropriation \$150,000,000* Supplemental 1951 Appropriation ...

850,000,000

\$7,522,169,000

Note-With the exception of the original 1951 MDAP appropriation which has been passed by Congress, these figures represent requests which have been forwarded for Congressional approval by the Administration. While passage is expected, the finally approved figures may differ somewhat.

turers be permitted to build their own fighter types for distribution to MDAP countries. This suggestion has received tentative approval although no concrete orders have as yet been placed.

However, this program will not take much of the bonanza away from our own industry, largely because European production methods do not lend themselves too readily to large volume production. Best estimates are that between \$175,000,000 and \$250,000,000 might be provided for foreign aircraft production.

First Expansion Step

The first step in the expanded aircraft production program is to order into peak production most of the plane types now in production, using existing tooling. This means that if a manufacturer who is now turning out eight or 10 planes a month has sufficient tooling on hand to build 20 planes a month, he will now do so. But for the time being no new tooling is being ordered and no new airframe plants are being opened. This first step will eat up a substantial portion of the money available.

The next step will probably be to put in production certain plane types not currently in military service. Under this heading would come transport type aircraft to meet the critical demand for air lift. Planes like Lockheed's elongated L-1049 Constellation and the large Douglas DC-6B would probably be ordered into large-scale production. would not only alleviate the existing lift shortage but provide new production lines for later expansion, should it be required.

Also under this heading would be new aircraft now in the prototype stage for which no production has yet been ordered and which show performance promise; an example is Lockheed's twin-jet XF-90 penetration fighter.

These two steps will provide aircraft production on a scale sufficient to supply the demands of the present emergency and will probably use up all of the available money. If the state of emergency becomes more critical, if Korea proves to be only a dress rehearsal for Communist strikes in Formosa, Indo-China, Iran, Yugoslavia or elsewhere, then the third step will be the provision of new tooling for high-volume production, the re-opening of the reserve plants and the implementation of the previously-let industrial mobilization 'skeleton" contracts.

Go-Ahead for 200

The Air Force has already given the "go-ahead" to more than 200 manufacturers of airframes, engines, electronics, armament and other equipment, and is now preparing a new batch of contracts. The Navy is in the process of issuing its letters of intent.

The build-up to peak production will not come in a sudden burst. Rather, it will be gradual over a period of about a year. Considerable personnel expansion will undoubtedly be required; Aircraft Industries Association estimates that employment will rise from its pre-Korea level of 254,800 to well over 500,000 by next summer and it will probably go well beyond that figure as the program gets into higher gear.

For the present, however, although some plants report moderate hiring programs, there appears to be no large-scale personnel expansion within the industry. The reason is that additional personnel are not needed until the parts vendors and raw material suppliers deliver sufficient stock to start stepped up production. Most plants are well enough staffed to take the initial steps in preparing for accelerated production.

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Manpower, incidentally, may become quite a problem as the program approaches its peak. Total employment in the country now is 61,-

Air Force--Navy **Production Aircraft and Engines**

The following is a list of airplane and engine types which are currently in production for the Air Force and Navy and which either have been or probably will be ordered into stepped-up production in the first phase of the military aircraft production expansion program. In most cases the step-up order will call for maximum

Air Force		Navy			
Contractor	Planes	Contractor	Planes		
	Bombers	Bombers			
Boeing	B-50	GrummanAF2S anti-sub-			
	B-47 jet		marine		
Convair	B-36		AF2W anti-sub-		
			marine		
	Fighters	DouglasAD attack bomber			
Lockheed	F-94 jet		A2D-1 attack		
	F-94C		bomber		
Republic		Martin	P4M-1 jet-piston		
	(Swept-wing F-		patrol bomber		
	84F jet probably	North Americ	an AJ-1 attack		
	will go into pro-		bomber		
	duction)	Lockheed	P2V patrol		
North Americ	can F-86D (YF-95) jet		bomber		
	F-86 jet	1	Fighters		
Northrop	F-89 jet	Douglas	F3D jet		
		Grumman McDonnell	F9F jet		
T	ransports	McDonnell	F2H jet		
		Chance Vought .F4U-5 jet			
Boeing					
Fairchild		11	ransports		
Douglas	C-124	Grumman UF-1 utility			
Northrop	C-125 assault		(also USAF SA-		
		** * * * * * * *	16 amphibian)		
Н	elicopters	Fairchild	R4Q (C-119)		
			P5M-1 flying boat		
Bell	M-12	Douglas	R4D-8 (super		
Piasecki	H-13		DC-3)		
			elicopters		
Sikorsky	YH-18	Sikorsky	HO3S		
	H-5		HO4S		
	11-0		HO5S		
	Trainers	Piasecki	HRP-2		
			HUP-1		
Convair	T-29	Bell			
Lockheed	T-33 jet		Trainers		
North Americ	ean T-6G	Lockheed			
	T-28		arning Aircraft		
		Larly W	PO-1W (Constel-		
Engines		Lockneed	lation)		
			Engines		
Pratt & Whiti	ney R-4360 piston	Dec 44 0 3371-14-	D 4960 miston		
Comment Et	J-48 jet	Fratt & White	ney R-4360 piston J-42		
General Elect					
Allison Div., (Wootinghouse	J-48 jet		
777 - 1 - 1 - 4	J-35 jet	Westinghouse	D 2250 miston		
Wright	R-3350	wright	R-3350 piston		

500,000, the second highest peak in history, and unemployment is only 3,400,000. It is doubtful that the unemployed pool can provide much in the way of personnel in the aircraft industry, since personnel departments in the industry, after scanning thousands of applications received in the post-Korea rush, estimate that only three or four out of several hundred applicants possess the skills or experience required for aircraft production work.

More Complex Planes

The increased complexity of modern aircraft has accentuated the need for skilled help; the amount of radar and electronic production, for instance, will be tremendously greater than it was in World War II. This type of production does not lend itself to training unskilled laborers as assembly experts, and large manufacturers of radar and electronics, such as Hughes Aircraft Co., are already beating the bushes for additional help, although production demands being made of them at present are only a portion of what can be expected.

The following is a round-up of the hiring and production acceleration plans of some of the larger airframe and engine companies in the industry and the products they will be called upon to produce:

Boeing Airplane Co. will step up production of the B-47 jet bomber at its Wichita plant and the B-50 bomber and C-97 heavy transport at its Seattle plant, expanding the facilities at the Renton, Wash., plant to handle C-97 assembly. The company has immediate need of skilled help, such as engineers, tool and die makers, machinists, jig builders, fabrication shop employes, sheet metal and machine shop layout men, assemblers, experimental mechanics, tool grinders and tool designers. It is estimated that "several thousand" employes will be needed within the next few months.

(Boeing's skilled help requirements are typical of the type of personnel required immediately in the rest of the industry).

Consolidated Vultee Aircraft Corp. has received additional B-36 bomber orders for its Forth Worth plant and may receive orders for San Diego production of T-29 twin-engine trainers later. The work week at Fort Worth has been stepped up from 40 to 50 hours and the company is now operating two 10-hour shifts and a "graveyard" ship of six hours and a half instead of the previous two eight-hour shifts.

Dauglas Aircraft Co. will step up production of Air Force C-124 heavy transports and probably F3D jet fighters, AD and A2D attack bombers for the Naty. No new hiring program under way yet.

North American Aviation received increased production orders for production of Air Force F-86 and F-86D jet fighters and T-28 trainers. May also get stepped-up orders for Navy AJ-1 attack bombers and T-6G Air Force trainers. NAA is hiring about 50

Aircraft Labor Market

This chart, distributed by Aircraft Industries Association, shows the labor market situation in selected aircraft manufacturing centers:

	Classification				Classification		
	May 1950	Mar. 1950	May 1949		May 1950	Mar. 1950	Máy 1949
Hartford	В	C	C	St Louis	C	D	C
New Haven	C	D	C	Cincinnati	C	D	D
Boston1	D	D	C	Cleveland	C	D	D
Buffalo	C	D	D	Columbus	C	C	C
New York	D	D	D	Baltimore	D	D	D
Chicago	C	C	. C	Dallas	A	B	A
Indianapolis	В	C	C	Ft. Worth	B	C	C
Wichita	B	C	В	Los Angeles	D	D	D
Kansas City	В	C	C	Seattle	D	D	C

¹Boston labor market area redefined in May to include Lynn-Salem.

Ratio of Unemployment Code to Labor Force		Definition of Code		
A	Under 3%	Tight or balanced labor supply		
В	3-4.9%	Slight labor surplus		
C	5-6.9%	Moderate labor surplus		
D	7-11.9%	Substantial labor surplus		

workers with specialized skills daily at its Downey, Calif., plant but has no estimate as to how many workers will be required at peak production.

Lockheed Aircraft Corp. has been told to increase production of Air Force F-94 and F-94C jet fighters and T-33 jet trainers and Navy P2V patrol bombers. PO-1W (Constellation) early warning aircraft and TO-2 jet trainers. Hiring about 50 workers a day, mainly engineers and skilled machinists. No volume hiring of inexperienced personnel is expected for some time, but the company estimates its 15,000 payroll will reach 30,000 by 1953.

Republic Aviation Corp. will build F-84 and F-84F (swept-wing version) jet fighters on a large scale. Expects to hire 200-300 employes a month until the end of the year. Estimated requirements for 1951 must wait establishment of firm delivery schedules.

The Glenn L. Martin Co. will step up production of P4M-1 patrol bombers and P5M-1 flying boats for the Navy. No personnel hiring program is planned at present.

McDonnell Aircraft Corp. has received orders for increased numbers of F2H Banshee jet carrier-based fighters. The company has not yet determined personnel requirements.

Northrop Aircraft has received stepup orders for its F-89 jet all-weather fighter, may receive later orders for the three-engine C-125 Raider assault transport. No new hiring contemplated for the immediate future.

Fairchild Engine and Airplane Corp. (Aircraft Division) has received orders for a "substantial number" of additional C-119 Packet troop and cargo transports. The order will have little effect on employment; no hiring will be done on a major scale.

Chance Vought Aircraft Division of United Aircraft Corp. will probably build additional quantities of its F4U-5N ship-based piston-engine fighter. Has not announced new personnel requirements.

Grumman Aircraft Engineering Corp. will step up production of F9F Panther jet fighters, AF2S and AF2W anti-submarine attack bombers for the Navy and will probably also get increased orders for the UF-1 utility transport (Navy) and SA-16 rescue amphibian (Air Force). Has not reported its hiring plans.

Piasecki Helicopter Corp. will receive increased orders for Navy HUP and HRP and Air Force H-21 helicopters. Personnel increase will undoubtedly be required but the company has not yet determined its needs.

Sikorsky Aircraft Division of United Aircraft Corp. will probably get stepup orders for Navy HO3S, HO4S and HO5S, Air Force H-5 and H-19 and Army YH-18 helicopters. Expects gradual need for additional skilled hands; no immediate large personnel expansion planned.

Bell Aircraft Corp. will build increased numbers of jet engine pods for the Convair B-36 and Boeing B-47 bombers, possibly also helicopters for both services. Expects personnel increase but has not determined the extent of expansion.

Pratt & Whitney Aircraft Division of United Aircraft Corp. has received greatly increased orders for R-4360 Wasp Major piston engines and J-42 jet engines from the Air Force and Navy. Will also receive later orders for J-48 jet engines. The Company plans to re-open its Southington, Conn., plant and has gone on a three-shift-a-day, seven-day-week schedule. The labor force will be greatly increased, but not until materials from suppliers start rolling in.

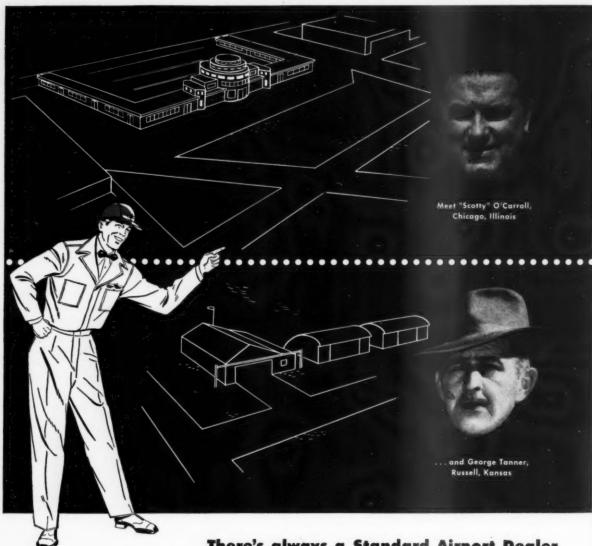
Wright Aeronautical Corp. will build increased numbers of R-3350 and other smaller piston engines. Plans call for hiring 400-500 a month for the next few months.

Allison Division, General Motors Corp. will increase deliveries of J-33 and J-35 jet engines. Employment will increase gradually but not importantly for the rest of this year. Has not yet estimated 1951 requirements.

General Electric Co. will step up production of J-47 jet engines. The company will need additional personnel but has not yet determined how many.

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CAB Reverses Policy in Parks Split-Up

Awards Feeder Segment to Regional Trunk

By WILLIAM V. HENZEY

THE VAST network of mid-west feeder airline routes originally awarded to Parks Airlines were reawarded by the Civil Aeronautics Board last week to Mid-Continent Airlines, a regional trunkline, and Ozark Air Lines, a new feeder.
The routes extend from Twin Cities

in the north to Tulsa and Memphis in the south and have been on the block for over a year because of Parks' inability to activate them within what CAB considered reasonable time."

With the cities involved clamoring fer service and previously unsuccessful applicants again seeking authority to provide the service, the case became one of the most complicated and controversial domestic route proceedings in years.

In an attempt to wind it up, the Board last week ordered immediate termination of Parks' entire certificate, granting of the so-called North Central segments to Mid-Continent, and granting of the Great Lakes and Mississippi Valley segments to Ozark.

Within three hours after CAB issued its decision, Parks' attorneys obtained an order from the U.S. Court of Appeals in Washington restraining the Board from making its ruling effective until certain motions have been acted on by the court. Unless eventually reversed by the court, however, the Board's decision will stand with the new certificates slated to become effective September 26.

Feeder Policy Change

The award to Mid-Continent marks the first time a trunkline has been selected to participate in the feederline experiment and the change in what appeared to be a firm policy gave rise to a strong dissent from Board Member Josh Lee.

The carrier operates trunk routes from Twin Cities to Houston and New O eans and its principal gain, accoding to opponents of the award, is entrance to Chicago which it had n previously unsuccessful in ob-

ctually, though 31 cities are lented on the north-central routes w ch Mid-Continent acquires, only ni e appear certain to receive feeder se rice by the carrier. These will be or Segment 1 of MCA's new Route between Chicago and Sioux City, an on the Milwaukee-Rockford, Ill., po tion of Segment 5. Segments 2, 3, an 4, and the remaining portion of Se ment 5 between Rockford and

Des Moines have been made the subject of an investigation aimed at suspension of service.

In selecting Mid-Continent, the CAB majority said it does not anticipate any significant harm to other air carriers by diversion of their traffic as a result of the single-carrier service made possible between points on its trunk route and points on the new feeder route.

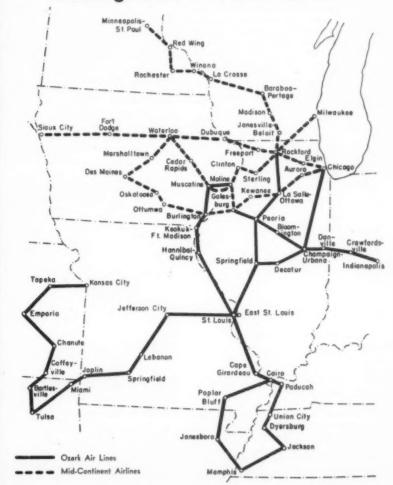
Primarily, they pointed out, the feeder route is an east-west route while the carrier's trunk system mainly is a north-south route. This fact, they reason, coupled with certain operating restrictions will permit MCA to serve competitive pairs of points only by "circuitous and inconvenient" operations.

Lee Disagrees

Board Member Lee did not agree with this reasoning. He contended that such action "is contrary to the Board's established policy and will surely weaken the confidence of the trunk lines in the Board's repeated assurances that it would not permit local air service to become competitive with the services of the permanently certificated trunks."

An outspoken advocate of an overall route pattern he pointed to the

Reassignment of Parks Routes



majority's decision in this case as illustrating the need for such a program, which, he said, would prevent a "situation such as this" where the majority felt it necessary to reverse its long-standing feeder policy.

To emphasize the seriousness of the move he quoted from an editorial in the June 15th issue of AMERICAN AVIATION which stressed the importance of industry confidence in CAB policy.

Mid-Continent, meanwhile, has started preparations toward activating the Chicago-Sioux City and Milwaukee-Rockford segments on October 1. The recent acquisition of 40-passenger Convair aircraft, the company said, makes available five twinengined DC-3's for the feeder operation.

Ozark Gets Major Award

Ozark Airlines a newcomer to the interstate aviation field, was awarded two-thirds of the Parks' network. It is a Missouri corporation whose previous air activities consisted primarily of an intrastate operation in Missouri during 1945.

Its president is Laddie H. D. Hamilton, who has had over 24 years experience in transportation and who at one time owned and operated a southern bus firm known as Dixie Coaches, Inc. Traffic vice-president is Joseph B. Carl, a pilot since 1937, and current president and general manager of Dixie Air, Inc. Other officers are Barak T. Mattingly, legal vice-president, and Arthur G. Heyne, secretary-treasurer.

In its application to CAB it proposed to operate portions of the routes with twin-engined DC-3 aircraft and portions with single-engined Cessna 195's.

Selection of the carrier for the Mississippi Valley route was anticipated by those close to the case but its receipt of the Great Lakes route occasioned some surprise, particularly because a CAB examiner had strongly urged awarding of the route to Turner Airlines, an active feeder operator. In fact, Board Member Russell B. Adams, though concurring generally with the over-all decision, issued a dissenting opinion in which he disagreed with the choice of Ozark over Turner for the Great Lakes route.

Better Utilization

One reason the majority used, however, in support of its decision was that the route mileage of the two systems when joined affords a much better prospect for the efficient utilization of equipment and the spreading of overhead than would the systems operated individually.

Since all agreed that Ozark was financially able to operate the Mississippi Valley route, the majority, relying on the carrier's representations of financial ability to serve the Great Lakes cities, said Ozark should be permitted to operate both routes to achieve the benefits of an integrated and efficient operation.

The Great Lakes routes cover approximately 700 miles from terminal to terminal and extend from Chicago to St. Louis on one segment, from Indianapolis to Galesburg, Ill., on another, and from Rockford to St. Louis, on a third, with service to thirteen cities involved.

The Mississippi Valley route, the largest of the three taken away from Parks, comprises a total of 1,470 route-miles with service to 27 points involved. One segment extends from St. Louis to Moline, Ill., a second from St. Louis to Memphis, a third from St. Louis to Tulsa, and a fourth from Kansas City to Tulsa.

Both Ozark's certificate and that issued to Mid-Continent will be valid for three years from September 26. The original Parks' certificate was slated to expire next March.

Certificate Terminated

The only general point on which the three voting members of CAB agreed unanimously was on the immediate termination of Parks' certificate. They used strong language to express their lack of enthusiasm for the recent inauguration of service by Parks over the Chicago-St. Louis segment of the Great Lakes route.

The last of Parks' route awards was made by CAB in 1948 and the carrier was one of five feeders to be issued an ultimatum by the Board last year to begin operations within a specified period. Parks did not begin within the period but entered an agreement

with Mid-Continent under which the latter would require-Parks' assets and routes.

From that point the case mushroomed into a mammoth proceeding in which all of the applicants in the three cases from which Parks' routes stemmed re-applied for the routes.

Shortly before CAB heard oral argument in the case this spring, the merger proposal with Mid-Continent soured and Parks arranged with the owner of a large irregular carrier for "adequate financing." During the course of the oral argument, attorneys for the line requested CAB to reopen. the record to consider evidence of the new financing. On the last day of argument, Parks' attorneys advised the Board that operations would begin within a matter of weeks over one segment, causing former CAB Chairman Joseph J. O'Connell to inquire "Why wasn't this done six months ago?

Nevertheless, the line went ahead with its plans and despite disapproval of airport notices and tariffs filed with CAB, began operations between Chicago and St. Louis during the last week in May. It is still operating, pending the outcome of its argument before the Court of Appeals. It has, however, received no mail pay.

The first battle in court is to be on a motion by Parks for a stay of CAB's decision pending judicial review of the entire proceeding. If a stay is ordered, it may be some time before the Ozark and Mid-Continent certificates become effective. If, however, Parks is unsuccessful in court, the most airline-starved area in the United States should receive almost immediate service.

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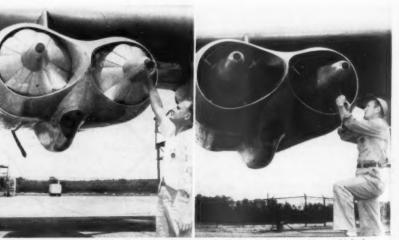
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Engine Doors—These are the first photos showing the new doors which have been added to the jet engine installations in the Convair B-36. By making it possible to stop air flow through the engines when they are not operating, the doors reduce drag. They prevent the compressors and turbines from windmilling and thus minimize the possibility of fire and severe vibration resulting from an engine failure. On the ground the doors are closed to keep foreign matter out of the engine. Note the manner in which the door segments are retracted into the center cone when not in use.



Production Stratojet—First picture of the Boeing B-47A six-jet bomber reveals no substantial changes from the prototypes. The 185,000-lb. bomber can carry over 20,000 lbs. of payload. The airplane is powered by six General Electric J-47 jets, and a later model, the B-47C powered by four large Allison jets will replace this type in production. The B-52 is basically similar but with eight jets and weighing 300,000 lbs.

Pan American Denied Domestic Routes by CAB

The four-year-old Pan American Domestic Route Case decision, held up for well over a year pending outcome of the PAA-American Overseas Merger Case, finally was issued this month.

Pan American, victor in the international case, was denied the domestic routes it had coveted for so long as links between its international gateway terminals.

The Board's unanimous decision was that there were adverse possibilities inherent in the certification of PAA to fly domestic routes in addition to its far-flung international routes.

They disagreed with Examiner William J. Madden's recommendation that Pan American be authorized to fly between New York and Miami via Philadelphia, Baltimore and Washington, subject to a restriction against the carriage of domestic passengers except on flights providing international services.

Used 1946 Traffic

It was pointed out in the decision that the examiner had based his recommendation on 1946 traffic data substantial number of passengers were moving over the Naw York-Miami segment on the routes of Eastern and National interchanging with PAA at Miami, whereas traffic data received by the Board since issuance of the examiner's re-

port showed that the volume of such interchange traffic has declined considerably.

Madden's figures covered a twomonth period in 1946, prior to Pan American's authorization to fly a direct route between San Juan and New York and prior to its San Juan-Caracas route authorization. These routes provided a more direct service to a part of the Latin American area which accounts for a substantial part of PAA's traffic, it was pointed out, and the Board's Traffic Survey for March, 1949, effectively demonstrates the changes that resulted.

In March, 1949, Eastern received from PAA 1,715 passengers and National 175 who were carried onward to Washington, Baltimore, Philadelphia, New York and Boston for a daily average of 63. This was just about one-half the daily average of traffic interchanged during the 1946 survey period.

Many Stop Over

It was also thought significant that the 1949 figures showed that only 1,890 northbound passengers interchanged to Eastern and National, whereas the total number of passengers to Boston, New York, Philadelphia, Baltimore and Washington from the Latin American points that provided the interchange traffic amounted to 9,595.

"The reasonable inference . . . is that many of those that interchanged at Miami preferred a Miami stop-over in the course of their journey and would probably stop there even if Pan American were in a position to carry them onward itself," said the Board.

Pan American still might get to fly between Miami and New York if the Board should approve its proposed equipment interchange with National Airlines.

PEOPLE IN THE NEWS

Maj. Gen. Philip B. Fleming, former chairman of the U. S. Maritime Commission, has been confirmed by the Senate as Undersecretary of Commerce for Transportation, in which post he will coordinate transportation policy and as such will be nominal head of the Civil Aeronautics Administration.

James Aswell, n Hill and Knowlton account representative, has been named public information officer for the National Security Resources Board. He is a former newspaperman.

Maj. Robert Dodds, superintendent of airways and airports for the Canadian Department of Transport, has been appointed Canada's Controller of Civil Aviation succeeding A. D. McLean, who was recently named to the Air Transport Board.

Joseph Brent, former special consultant on civil aviation to the Assistant Secretary of the Air Force, has joined the Central Intelligence Agency. J. Parker Van Zandt, president of Aviation Research Institute, has taken Brent's former job.



Kaman HOK-1—Winner of a recent Navy sponsored design competition, this HOK-1 liaison helicopter is now being produced on a limited production order for the Navy. Designed and built by Kaman Aircraft Corp., Windsor Locks, Conn., the HOK-I has a gross weight of about 3,500 pounds, carries a pilot and three passengers and is convertible into an air ambulance for two stretcher patients and a medical attendant. A single engine drives both rotor blades.

First Mid-Year Reports Point to 1950 Airline Profits

Revenue-expense reports of five domestic trunklines show an aggregate net profit of about \$5,500,000 for the first six months of 1950, indicating another favorable year for the airlines, barring adverse effects from mobilization events.

Most improved showing was that of Braniff Airways, which had a net profit of \$402,000 in the first half of this year, as against a net loss of \$18,700 in the comparable period last year.

Braniff's domestic route earned a profit of \$563,631 for the period, while its international route lost \$161,588. Expenses for the half-year were \$785,000 higher than a year ago, due chiefly to increased operations, but this increase was more than offset by an increase of \$1,217,000 in reve-

Airline Six-Month Profit

Carrier	Net Income to June 30 1949	Net Income to June 30 1950	from last year	
American	\$3,535,909	\$2,426,544	\$ −1,109,365	
Braniff	. (18,700)	402,000	+420,700	
C&8	296,621	148,207	-148,414	
Eastern .	2,148,361	2,459,585	+311,224	
MCA	148,400	154,284	+5,884	

American Airlines reported a net profit of \$2,426,544 on revenues of \$51,-765,346 and operating expenses of \$46,-603,757, compared with a net of \$3,-

535,909 on revenues of \$49,751,930 and expenses of \$45,517,335 in the first six months of last year. However, the company's income tax liability this year was \$2,180,000, as against \$90,000 in 1949, when taxes were reduced by carryforward of 1948 losses.

Chicago and Southern reported a consolidated net profit of \$148,207, compared with a net of \$296,621 for the corresponding period of 1949. Profit on its domestic operations was \$142,432, compared with \$202,197, while profit on the international route was \$5,775, compared with \$94,424 in the first half of last year.

Delta Air Lines earned a net profit of \$815,751 on operating revenues of \$17,185,295 and operating expenses of \$15,775,141 for the fiscal year ended June 30, compared with a net of \$639,400 on operating revenues of \$15,227,846 and operating expenses of \$14,281,957 for the previous year.

Eastern Air Lines reported a net profit after taxes of \$2,459,585 for the first six months of 1950, compared with a net of \$2,148,361 for the comparable period last year.

Mid-Continent Airlines reported a net of \$154.284 for the first six months of 1950, compared with \$148,400 for the same period last year. Operating revenues and expenses for this year were \$17,185,295 and \$15,775,141, respectively, as against \$15,227,846 and \$14,281,957 in the first half of 1949.

Northwest Airlines released figures showing system operating revenues totaling \$21,291,596 for the first half of this year, compared with \$18,437,184 in the same period last year. The half-year revenues were highest in the company's

Aviation Calendar

August 19-Tennessee air progress conference, Knoxville, Tennessee August 19-20-1st Annual California

air freight clinic, Oakland, California. August 21-24—Illuminating neering Society national technical committee meeting (aviation lighting session August 24), Huntington Hotel, Pasadena, California.

August 25-27-Air Force Association 4th annual national convention, Hotel Statler, Boston, Massachusetts. August 26-27-National Air Logan International Airport, Boston,

Massachusetts. Sept. 2-4-National Air Race date postponed to May 19-20, 1951.

Sept. 4-6-National Flying Farmers Association annual convention, Bemidii. Minnesota.

Sept. 5-7-6th annual spark plug and ignition conference, sponsored by Champion Spark Plug Co., Secor Hotel, Toledo, Ohio. Sept. 12-14—Conference on ground

facilities for air transportation, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Sept. 15-17-Instrument Society of America instrument maintenance clinic, New York State Institute of Applied Arts and Sciences, Buffalo, New York.

Sept. 18-22-Fifth national instrument conference and exhibit, Me-morial Auditorium, Buffalo, New

Sept. 19-21-Institute of Navigation -Radio Technical Commission for Aeronautics-Radio Technical Com-mission for Marine Services joint meeting on navigation and electron-

ics, Hotel Astor, New York, New York. Sept. 25-27— National electronic conference. Edgewater Beach Hotel,

conference, Edgeward of Automotive Sept. 28-30—Society of Automotive Engineers aeronautic meeting and display, Biltaircraft engineering display, Bilt-more Hotel, Los Angeles, California.

Sept. 28-30—Air Reserve Ass'n an-ual convention, Hotel Texas, Ft. nual Worth, Texas.

Sept. 28-30-International west Aviation Council 14th annual convention, Sun Valley, Idaho.

Oct. 2-4-National Association State Aviation Officials annual convention, Minneapolis, Minnesota.

Oct. 12-13-1950 conference on airport management and operations, Max Westheimer Field, North Campus, University of Oklahoma, Oklahoma. Norman,

Oct. 16-20—CAA Airports Advisory Committee meeting, Ft. Worth, Texas. Oct. 17-18-3rd annual New State airport management conference, Syracuse, New York.

Oct. 19-20-Tennessee aviation conference. Knoxville. Tennessee.

Oct. 25-26-Flight Safety Foundation annual safety seminar, Denver,

International

Sept. 5-10-Society of British Aircraft Constructors annual flying display and exhibition, Farnborough, England.

Sept. 14-ICAO Airworthiness/Oper-

ations meeting, Paris.
Sept. 19—ICAO Air Navigation Commission meeting, Montreal.
Sept. 27—ICAO Council meeting

(11th Session), Montreal. Sept. 28—ICAO Air Transport Com-

mittee meeting, Montreal.
Oct. 12—IATA Executive Committee
meeting, San Francisco, California.

meeting, Fairmont Hotel, San Francisco, California. Oct. 16-20-IATA Annual

THE RIGHT FUEL GAGE for your AIRPLANE Honeyweii electronic fuel gage. The first null balance, capacitance-type fuel gage.

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Reliability, the quality of being persistently and dependably *right*, is the ultimate requirement of an airplane fuel gage . . . reliability in accurately measuring fuel available for engines at all times . . . reliability in functioning day-in and day-out without troublesome maintenance.

To meet this prime requirement, every facility of the Honeywell engineering, research and manufacturing staff has been brought to bear on perfecting a fuel gage which applies sound electrical principles to the problem of fuel quantity indication and incorporates rugged lightweight construction for optimum performance under adverse conditions, and with minimum maintenance cost.

Honeywell Fuel Gages are built in a plant devoted exclusively to the manufacture of electronic control and measuring devices for the aircraft industry. Back of this highly specialized manufacturing organization is a complete program of testing and investigation of, not only the gage itself, but fuel characteristics and installation problems as well.

For five years Honeywell Fuel Gage installations have proved the rightness of the Honeywell system. Now new component designs increase its adaptability... make it right for your airplane because it is engineered right, built right, and installed right. Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Leaside, Toronto 17, Ontario.

Honeywell

Where Reservists Stand

By James J. Haggerty, Jr.



A ERONAUTICAL engineers, airplane mechanics, aircraft instrument men, aircraft electricians and others engaged in the aircraft manufacturing and air transportation industries are eligible for deferment from call to active duty as reservists in the armed forces, according to a list of deferment criteria issued jointly by the Departments of Defense, Labor and Commerce.

But you needn't feel smug about it. Also included in the deferred categories, according to our interpretation of the Commerce Department's "Tentative List of Essential Activities" are such defense necessaries as chewing gum makers, builders of horse-drawn vehicles, makers of musical instruments, garbage collectors, operators of hot-dog stands and pants-pressing establishments, candy manufacturers, art-gallery attendants, bartenders and snuff makers. Also schliffi machine operators, although extensive research has failed to disclose just what a schliffi machine is.

Apparently Commerce, harried by representatives of every industry, took the easy way out and listed practically everyone as essential, under the broad major heading of "Activities essential for the maintenance of national safety, health and interest." We say practically everyone because Commerce, probably with a twinge of conscience, refused to recommend deferment for beer, wine and liquor wholesalers, doll makers, house slipper manufacturers and makers of feathers, plumes and artificial flowers, an act of discrimination which will certainly cause some bitter feelings between the non-deferred doll makers and the deferred snuff makers.

Impractical Yardstick

The point of all this is that these criteria lists are not going to be worth much as a practical yardstick. Possibly Defense could meet its manpower requirements for the immediate future by recalling from the reserves only those employed in the doll, house slipper, feather, plume, artificial flower, and other similar industries, but if we go into a reservist-recalling program on a large scale (and there is every indication that we will) Defense will have to throw Commerce's recommendations out the window and start recalling chewing gum and snuff makers even at the risk of jeopardizing "national safety, health and interest."

So if you are a member of one of the reserve components and you happen to find yourself on the current deferred list, our advice would be not to make any longrange plans on the strength of such flimsy evidence. Secretary of Commerce Charles Sawyer is himself a subscriber to this theory. "The list of essential activities is very broad in its coverage of essential industries," he blandly understated, "and will be subject to revision from time to time as the national emergency requires."

At any rate, here are the general criteria and methods for staying out of the reserve calls, if you are so inclined:

Basically, the Defense Department will defer reservists "engaged in a critical occupation necessary to a highly essential activity." Thus, while snuff making is an essential activity, the man who sweeps the floor of the snuff factory would not be eligible for deferment since his is not a critical occupation within the industry, although presumably the chief snuff engineer would be eligible.

Reservists who are granted deferments will be deferred only until they can be satisfactorily replaced in their critical occupation. Deferments in all cases will be made on an individual basis and may be terminated at any time because of "overriding military considerations."

Initial deferments may not exceed a period of six months, and no extension of the deferment may be made for more than six months. At the end of each six-month period a review of the case will be made to see if proper cause for the delay still exists and a "stricter application of the criteria for deferment (will) be made in evaluating requests for renewals."

After Orders Are Issued

Requests for delay in call to active duty may be made either by the reservist or his employer, but they can not be made until the reservist has actually received orders to report for duty. Requests for deferment should be addressed as follows:

Air Force—Through the numbered air force for the area in which the reservist resides. Navy—To the Chief, Bureau of Naval Person-

nel. Non-aviators should send their requests via their Naval District commandant. Flying personnel are to apply via the Chief of Naval Air Reserve Training, NAS, Glenview, Ill.

Army—Through reserve unit commanders or unit instructors to the commanding general of the Army Area in which the reservist resides.

Marine Corps—Through the normal chain of command, starting with the local inspector instructor.

National Guard—Through the Adjutant General of the state in which the reservist resides.

The Defense Department will accept the recommendations of the Departments of Labor and Commerce as to what activities are essential and what occupations are critical. In addition to the airframe, engine and propeller manufacturing industries, other industries involved in aviation or aircraft production which Commerce has classified essential include (1) ordnance and accessories, (2) chemicals and allied products, (3) products of petroleum and coal, (4) rubber products, (5) primary metal industries, (6) fabricated metal products, (7) machinery (8) electrical equipment and supplies, (9) transportation equipment, (10) professional, scientific and controlling instruments, photographic and optical equipment, watches and clocks, (11) crude petroleum and natural gas extraction and refining, (12) special trade contractors in construction work, (13) services incidental to transportation and (14) telecommunications.

Airline personnel, airport operators and other air transportation workers are also eligible for deferment under a special category, "Major Group 44—Transportation by Air." This group includes "companies engaged in furnishing domestic and foreign transportation by air and so those operating airports and flying fields and furnishing terminal services. Companies primarily engaged in performing services which may incidentally use airplanes (crop dusting, aerial photography, etc) are classified according to the service performed."

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INDUSTRY PERSONNEL

Tom A. Murphy and Henry Lehne have been elected vice presidents of Republic Aviation Corporation. Lehne joined the company in 1940 as an engineer and subsequently became military



Murphy

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contracts director and then sales manager, holding the last post for the past three years. Murphy was wartime Air Force representative at the Republic plant, joined the company two years ago as subcontracts manager, and later advanced to purchasing director, factory manager and assistant general manager.

Richard L. Johnson was elected vice president-finance of The Glenn L. Martin Company to succeed Daniel A. Evatt, resigned, and Jess W. Sweetser was elected vice president-sales. Sweetser



Johnson

Sweetser

joined the company in February as assistant to the president in charge of sales. Johnson, formerly assistant to the vice president-comptroller of Douglas Aircraft Co., joined Martin in January as assistant to the president.

E. S. Safford has resigned as director of sales for Beech Aircraft Corp. to become proprietor of the Spencer Trailer Co., Augusta, Kansas. Leddy Greever and Mike Neuburger will continue to function as domestic and foreign sales managers, respectively. Lynn D. Richardson has established an office in Washington as manager of Beech's military and airline sales division.

MILITARY PERSONNEL

Brig. Gen. Raymond C. Maude, former assistant director of requirements in the office of the Deputy Chief of Staff, Development, has been assigned as Assistant for Development Programming in the same office.

PRODUCTION SPOTLIGHT

Cyclone Contract: Wright Aeronautical Corp. has received a \$4,000,000 Navy contract for Cyclone 9 engines to power the Navy's recently-ordered 100 R4D-8 (Super DC-3) transports. Use of the 1,475-horsepower engines will step up performance of the R4D-8, increasing top speed from 228 to 275 miles per hour and cruising speed from 154 to 188 miles per hour. In addition, payload can be increased from 6,800 pounds to a maximum of 10,100 pounds.

Designation Switch: Students of new aircraft who just got used to calling some new Air Force planes by their proper designations will have to reverse their fields again. The Air Force has abolished its policy of giving a major modification of a plane type a new number, and instead will just tack a new letter on the end of the designation. For instance, when Republic Aviation Corp. developed a speedier, swept-wing version of its F-84 Thunderjet, it was originally designated F-84F. Later, to avoid confusing it with ordinary straight-wing Thunderjet models, it was named the YF-96A. Under the new policy it becomes the F-84F again. Similarly, the YB-56A, a four-engine version of the Boeing B-47 jet bomber, reverts to B-47C; the North American YF-95A, a modification of the F-86 Sabre, becomes the F-86D again; and the Lockheed F-97, a thin-wing version of the two-seat F-94 all-weather jet fighter, is now the F-94C.

New Models: Lockheed Aircraft Corp. is working on a new patrol bomber, the XP3V-1, which is designed to operate from a large, flush-deck aircraft carrier. It will be powered by two piston engines and two jet engines, like the Martin P4M-1 Mercator, another Navy patrol bomber . . The Fairchild XC-120, the first detachable fuselage airplane, has started taxi tests at Fairchild's Hagerstown, Md., plant and first flight is expected any day now . . The first two models of Fairchild's T-31 trainer have arrived at Randolph AFB, Tex., to participate in the Air Force's basic trainer competition against the Beech T-34 and Temco T-35. The competition has taken on new importance since the outbreak of the Korean war, due to plans for an expanded pilot training program . . The Glenn L. Martin Co. has delivered the first two P4M-1 Mercator patrol bombers to the Naval Air Test Center, Patuxent River, Md.

Shut-Downs Killed: The vacation plans of a number of workers in aircraft plants were given a rude jar as the expanded production program forced the Air Force to ask 22 manufacturers not to close their plants for the customary two-week vacation period. Manufacturers affected were those making critical items or those whose delivery schedules are critical. The 22 manufacturers are not the only ones involved in the expanded program, however; a large number of plane plants, notably those on the West Coast, do not customarily close down for vacation purposes.

No Turbodyne Sale: Contrary to reports, Northrop Aircraft, Inc., has not sold its XT-37 Turbodyne engine, although such a sale is a possibility. Northrop officials state that the company is in the process of "exploratory negotiation" with General Electric Co. for the sale of the engine and manufacturing rights. The Turbodyne is a large turboprop engine with a design power capability of 10,000 horsepower.

Last Convair-Liners: In a timely move, as Air Force plane requisitions threatened to reduce even further the airlines' four-engine fleet, American Airlines snatched up the last four available Convair-Liners. Consolidated Vultee Aircraft Corp. built 178 of the twin-engine transports, all of which are now in service.

Major Sub-Contract: Ryan Aeronautical Co. has received its largest single order since World War II, a contract of undisclosed dollar value from Boeing Airplane Co. (Seattle) for increased production of aft fuselage sections for the Air Force C-97 heavy transport. The order brings to over \$10,000,000 the dollar value of new contracts received by Ryan in the last month.





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de Havilland Dove Wins CAA Certification

By RICHARD G. WORCESTER

THE CAA's airworthiness certificate for commercial operation of the de Havilland Dove 8-11 passenger airliner is the outcome of negotiations been the CAA and the British Air Registration Board in conjunction with the makers.

The Dove becomes the first British—indeed the first foreign—civil transport to gain this certificate in the postwar period. There has been a nominal recriprocal agreement between the U. S. and Britain to recognize airworthiness certificates but the flow of postwar exports has been from the U. S. to Europe and until recently there has been no foreign transport to regularize the reverse procedure.

There are about 300 Doves in operation all over the world flying in latitudes and temperatures from the equatorial heat of the Anglo-Egyptian Sudan to the Canadian winter. Some of the earliest production aircraft were sent to places with the most uncompromising temperatures and consequently the de Havilland company has now embodied modifications here and there to improve its operation under these conditions. In other words it is a thoroughly tried airframe which has a record of good service.

Although the de Havilland Gipsy Queen engines in the Dove were based on an engine which had been through the war with hundreds of thousands of hours' flying, the process of gearing and supercharging the basic engine involved changes which were fundamental, and it was confusing that the same name was retained.

Gipsy Queen Engines

The company had to start more or less from scratch and build up the overhaul time gradually. It is no reflection on the Gipsy Queen 70 (any more than any other entirely new engine) to say that this was a long and uphill struggle. However, when the overhaul period rose to 500 hours the going was easier and now after many years of experience the engine is a practical commercial proposition. The de Havilland organization has a world-wide network of Dove and C psy Queen agents and spare parts. D H. can recondition the engine or offer a system of replacing engines for a fixed fee.

The propeller was evolved, as it were, under one roof with the engine and airframe, and the constant speed hib was already well proved. The

changes involved the use of an extra blade, the braking pitch range and incorporation of feathering—which incidentally was one of the points of difference between U. S. and British practices. A compromise has now been worked out and the Dove meets the U. S. requirements under this heading at the present time.

Operators of the Dove who are potential buyers of the company's newer and larger light transport, the Heron, would find that many of the airframe and engine parts are common along with several major assemblies. There is therefore the possibility of a greater standardization and interchangeability than is normally the case. The Heron is a 14-17 passenger transport with a still-air range of 700 miles which sells for \$98,000; this compares with the price of \$55,000 for the Dove, fully equipped.

The Dove has been designed to provide modern travel standards in a small aircraft that can be operated at low cost even on a modest utilization but which has maintenance features to suit it for extensive use. It brings mainliner features economically within the reach of tributary services while they are still in the stage of development from perhaps 800 or 1,000 hours a year up to 2,000 or 3,000 hours a year.

In short, the Dove is a small transport or executive airplane built to standards of maintenance, equipment and performance comparable with arterial airliners. These standards are demanded on the score of safety, comfort and operating convenience.

Cruises at 155

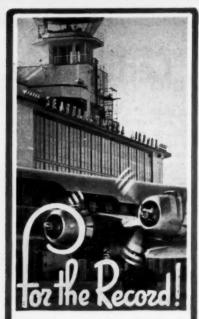
The Dove transports over six ton-miles of payload for a gallon of fuel with a level of security from the single-engine performance which is high for the class of airplane. Perhaps the most typical duty of the Dove is to work stages of 200-300 miles with tanks half full carrying a payload of 8-11 passengers at its most economical cruising speed of 155 mph. There is flexibility in the choice of range and payload and with the maximum passenger load of 11 there is 44 cu. ft. of separate baggage space.

The shape of the aircraft was evolved having in mind low loading doors and shoulder-level maintenance. The outstanding technical feature of the construction has been the novel metal-to-metal cementing by the Redux process which is also used in the Comet jet airliner.

Inside the cabin the Dove is a small airplane but the seats afford plenty of legroom, the windows are large and the wing does not greatly obstruct the downward view. The cabin is well ventilated and can be heated.

First Approval—factured airplane to be officially qualified for certification by CAA under a long standing reciprocal agreement. The Dove is an 8-11 seat feeder type transport powered by two 345-horsepower D.H. Gipsy Queen engines and grossing 8,500 pounds. It has a wing span of 57 feet, length is 39 feet 4 inches and height to tip of rudder 13 feet. It has a trycycle landing gear and can be equipped with reversible propellers. Airworthiness certificates will be awarded to the individual airplanes in the regions where they are registered.





While there are scores of airlines in operation throughout the world, and many suppliers catering to them, there isn't anyone anywhere who maintains a larger, finer quality stock of aircraft engines, parts accessories and components than Frank Ambrose Aviation Co.

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Design Trends

By Richard G. Worcester



THE CRITICISM which has appeared of the F-80 in Korea does not, of course, put a finger on the trouble. It is typical that the Pentagon's reasoned reply received little or no attention thus leaving the public with a complete misapprehension. So it is worth quoting the Chief of Staff that the F-80 is "much better than any other single aircraft in operation."

The fundamental trouble has nothing directly to do with the F-80 and goes back to the old question of wing loadings. There is nothing wrong with the USAF and the Navy asking for certain aircraft with high wing loadings because this type of fighter is suitable in some operations like night fighting which often resolves itself into a long, uphill stern chase.

A high wing loading is effective against ground installations where the targets are in plain view and can be easily blasted in a single terrific sweep. But the mistake, surely, lies in asking for all the new aircraft with high wing loadings and large turning radii. To achieve a balanced fighter force there ought to be available aircraft with small and medium as well as large, turning circles.

The military shows no signs yet of appreciating that when ground targets are partially or wholly obscured the essential weapon is the low-wing-loading fighter which can twist round and attack from different directions. Only this nimble type of fighter can fight (not merely fly) at 45,000 feet and the agile, large-winged fighter is most effective in harrying an attacking bomber force.

The stock answer to all this is that the low-wing-loading fighter is too slow. This now is entirely out of date because the thrust of modern jet engines can give all the speed the designer can use.

What would this low wing loading fighter look like? Here are some figures how they might differ from those of the F-86 which are shown in brackets: span, 49 feet (37 ft.); length, 39 feet (37 ft.); weight, 15,800 lbs. (13,715 lbs.); forward view over the nose, 15° (9°); static thrust dry, 9,000 lbs. (5,200 lbs.); wing area, 380 sq. ft. (274 sq. ft.); maximum level speed sea level, 670 mph (670 mph); ceiling, 65,000 feet (about 50,000 ft.), and wing loading, 39 lb./sq. ft. (50 lb./sq. ft.). If this fighter were adapted for ship-based use its takeoff speed would be 90 mph. TAS instead of about 120 mph for new aircraft like the F7U and F4D.

In some fields of work the aircraft industry may need a little prompting and encouragement but missile research does not happen to be one of them. There have been a few carping small voices raised at alleged lack of progress in the United States, but as these same people did not take the trouble to visit the USAF's new long range proving ground at Cocoa, Florida, it is not surprising that they have missed the significance of the efforts.

The WAC Corporal is not a strategic weapon but a research tool whose strategic implications lie in an understanding of the magnitude of the aerodynamic forces at M 4.5 which must be overcome if the trajectory is to be effectively controlled. The V-2 was about ten years ahead of its time, which is one reason we are still firing them. Another reason is that while stocks remain, firing V-2s is comparatively inexpensive.

Far from being slow, Martin in particular has done very well to improve upon the power-weight ratio of the V-2 in so short a time with their Viking. Hughes, Convair, Ryan, North American, Northrop, Curtiss, Boeing, Fairchild, Douglas and others have worked with the three services as a team and their combined achievements are one of the brighter spots in the defense preparations.

It is easy to take a superficial view and ask for the moon. So many people do not seem to appreciate the phenomenal complexity of the equipment and the relentless character of nature's opposition to very high speeds. What are you to do with ram air temperatures measured in hundreds—nearly thousands—of degrees? And consumptions of something fantastic around 20 lb./lb.th./hr? And the rebellious behavior of fuels like hydrogen peroxide and red fuming nitric acid? The engineers at Cocoa have another enemy—humidity—which quickly eats into the delicate electrical connections and mechanical linkages.

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CAPITAL'S paint scheme on the exterior of the Connies goes a long ways towards making the planes look like new. Actually three of the fleet are Constellations originally purchased by

KLM and later traded in for long range versions. The other two are former C-69's. All five have been brought up to the same standards.

Capital Connies Get Luxury Cabin Redesign

... love birds, plants and plastic doors

CAPITAL AIRLINES has followed up the shrewd bargaining with which it arranged for the purchase of five Lockheed Constellations with a spectacular reconditioning program which should make their new ships the talk of the industry.

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It's no secret that the Constellations purchased by Capital are of the earlier series Connies, the 049 and 649 group. But stepping into the main cabin or the "Capital Cloud Club" aboard their Connies is an experience. One is prepared for this to some extent by the unusually attractive exterior paint scheme.

This includes a dazzling white cap along the entire length of the fuse-lage set off with well balanced splashes of Orlando Red in the shape of a wide stripe. At the forward end of the airplane, just aft of the cockpit windows, the airline's symbolic eagle forms one end of the stripe while at the other end three feather-like designs stretch upward along the height of the triple rudder members.

Forward Lounge

Eight of the Connie's 57 seats are forward in the Capital Cloud Club. Access to the Club is through two full-size transparent plastic doors, each weighing over 90 pounds. Before the Capital eagle and the words

"Capital Cloud Club" were drawn on the doors, several people failed to notice there were doors in place and walked into the solid structure. Actually the doors are the largest



THIS VIEW is typical of the seating arrangement on either side of the cabin aisle. Note the rug on the forward bulkhead. In the upper part of the photo one of the flower pots used on the forward cabin wall can be seen.

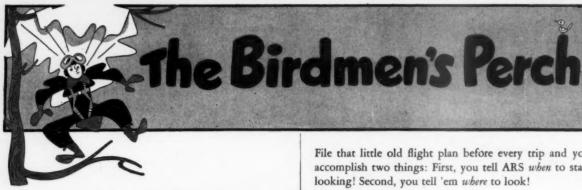
pieces of Sierracin ever molded by

It's true that the pair of love birds, very much alive and in an ornate cage, are quick to catch one's eye, but so are many other features of the lounge. The live plants growing in specially designed vases are hardly less appealing and the color scheme tops it off.

The upper half of the interior, above the window level, is finished in light blue gray, sharply contrasting the coral patches of color which form a line between the windows and blending into the dark blue gray which stretches from the base of the windows to the floor. Windows are draped in Goodall's white gold Sapphire Cloth. And the floor of the club, like that of the entire cabin area, is covered with Goodall's Luxuria carpeting in Guard's Blue.

Tables Provided

Along the right wall of the Club are two double seats, custom-made to form a divan with a center folding arm which can be used or displaced into the seat back. Another settee forms an "L" across the rear wall on the right side. A custom built table tapers along in the opening of this "L" in such a manner that it serves the four passengers along



AH, THE CALL OF THE WILD BLUE YONDER!

There's nothing like a tankful of that super-powerful Gulf Aviation Gasoline and some perfect flying weather to coax a trip out of the most phlegmatic flyboy.

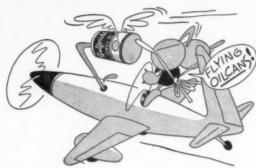


All of which brings us to today's lesson in common sense: You'd better file a flight plan!

Then-just in case something untoward happens enroute, ARS (Air Rescue Service) will find you in hours, instead of days or weeks later.

Listen, Pal, it's no fun to sit out there without benefit of civilization or a good ham sandwich, just wondering if they're looking for you!

File that little old flight plan before every trip and you accomplish two things: First, you tell ARS when to start looking! Second, you tell 'em where to look!



AND AS LONG AS YOU'RE FILING THINGS . . .

File this away for future reference!

Gulfpride Aviation Oil-Series D-has rescued more engines from distress than you can shake an oil stick at!

How come? Because it's absolutely, positively the finest detergent dispersant oil in the world for horizontally opposed engines-that's how come!

Gulfpride Aviation Oil-Series D-is the only aviation

oil put through Gulf's exclusive Alchlor process to remove extra carbon and sludge

Yessir-that good Gulfpride Aviation Oil-Series D-is just plain kind to your crankcase. Try some and increase those periods between overhauls up to 100%count 'em: 100%!



AVIATION PRODUCTS







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the right wall and the two on the rear settee.

On the left side of the Cloud Room two additional seats face one another across another small table, one which can readily be removed and stowed away when not in use. On the forward wall, next to the rear facing seat, is a small stand which houses a radio. Programs from the radio are broadcast through speakers housed in attractive ceiling pieces. Reception is selective in the isolated sections.

A transparent window is provided in the Cloud Club-cockpit door so that the inquisitive passenger can observe goings-on in the cockpit without going forward. The rear wall of the Cloud Club, over the settee, carries a large full-color painting of the U. S. capitol.

Cabin Color Scheme

Stepping rearward from the Cloud Club, one passes through the transparent door, the narrow coat room, and through the second door into the main cabin. Here there are 10 rows of four seats each, followed by three doubles on the right side and then a single seat. On the left side, across from the rearmost seats, is a double settee-type seat for the stewardesses. This faces into the aisle.

The cabin is decorated with the upper walls, to the window level, in light beige, then light blue in the areas between the windows blending with dark beige from the window sill to the floor. The floor is finished in rich Guard Blue carpeting. The windows are curtained in Goodall's Klondike fabric of rich blue with delicate gold stripes.

The seats are two-tone gray stripe, Goodall's Banner fabric. They feature air foam seat cushions and backs. Cabin seats are made by Teco (Transport Equipment Co.) in the 649 planes and by Warren McArthur in the 049's.

On the forward wall of the cabin, on either side of the Capital Cloud Club entry door are style-fashioned copper flower pots mounted flush to the wall and decorated with artificial vy. The lower part of the forward wall, from knee-level height, is finished in the same blue carpeting used in the floors.

The luxurious furnishings throughout the airplane are matched by practical improvements for convenience and greater profits. The Capital connies are the first of the early peries Constellations to be modified by Lockheed to boost takeoff gross weight from 93,000 to 96,000 pounds. When delivered the planes are directly out of overhaul where they had complete 8,000-hour overhauls performed during modification. The



SOME IDEA of the luxurious furnishings in the Capital Cloud Club can be had from this photo. The plants shown here are real. When in service a cage with a pair of live love-birds is carried on the table top just forward of the flowers. The solid panel plastic door to the right is one of two 90 pound, clear plastic doors used in the forward area.

planes and engines have been brought up to the latest manufacturer's specifications.

Handy Galley

Relocation of the buffet from the forward area to a split arrangement on either side of the cabin entrance door should provide a convenient working arrangement for the stewardesses. In the forward galley unit are located the nine tray carriers while the rear unit includes the work area, ovens, garbage disopsal, etc.

During the past year Capital has carried on a considerable number of international charter trips using their DC-4 aircraft. In reworking its Constellations, the company arranged to have standard Loran and mighrange altimeter for pressure pattern flying installed. This equipment is completely enclosed in one wall of the Capital Cloud Room. On a few minutes notice the Cloud Room, or a portion of it, can be converted into a navigator's compartment.

Capital made its first scheduled flight with the Constellation on the Chicago run on July 30. The second airplane will be delivered in the week of the August 14 and by the end of September the fleet of five planes should be in service. Capital arranged for the purchase of the five airplanes from Lockheed on terms with no down payment and no interest on the over-all investment. The planes were purchased at a cost of \$684,000 each or a total investment of \$3,420,000.



REARWARD FACING seat on the left side of the Cloud Club. An attractive table can be mounted between this and the adjacent seat for card playing or meal service. Note the radio at the right of the chair.

Capital will pay off this equipment at the rate of \$95,000 a month, according to the contract schedule, and in the meantime will be operating a fleet of five Constellations with deluxe interiors on the competitive Chicago runs.

Above, front view with door lowered, showing components layout. Note crystal and coils plug-in unit in center of receiver.

Engineered to exacting specifications for reception of radio typewriter transmissions

The new 51N-5 is Collins designed for maximum performance and long-time reliability in frequency shift receiving applications.

It is engineered for continuous duty (in pairs) as a sensitive diversity receiver for use with the Collins 706A-2 frequency shift converter. The AVC characteristic is such as to furnish the proper information for the 706A-2's diversity selecting circuits.

Sensitivity is sufficient to give satisfactory reception with minimum r-f signal levels. Selectivity is as narrow as is practical from the

standpoint of circuit stability and transmitter channel accuracy. Four tuned circuits ahead of the mixer provide image rejection of 60 db at the highest operating frequency to more than 100 db at the lower frequencies.

An outstanding convenience and time-saving feature is the incorporation of the crystal and all r-f coils for each desired frequency in a single plug-in unit. These crystal and coil units can be pre-tuned to any frequency within the range of 2 to 24 mc.

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Interlock-Newest Traffic Control Aid

By WILLIAM D. PERREAULT

WITH traffic density around airports on the increase and operations in marginal weather becoming more common, the problem of controlling traffic in the twilight zone between the airways control and airport control becomes increasingly complex. Mechanical interlock equipment, such as recently installed at Boston's Logan International Airport and New York, promises to minimize the problem.

The installation at Boston of mechanical interlock equipment, built by Ground Railway Signal Co. of Rochester, N. Y., represents the first use of a new traffic control medium as part of RTCA's transition system. The mechanical interlock provides a visual system of signals between the control tower and the airways traffic control center.

The visual signal eliminates multiple verbal exchanges between the center and tower via telephone and provides a safer and more efficient service. No two aircraft can be assigned the same airspace without it being apparent prior to the issuance of a clearance. If the tower requests an altitude which has already been assigned by the Center, it is impossible to get the required

clearance on the interlock signal board.

Two Control Panels

Basically, mechanical interlock equipment consists of two control panels, one in the control tower and one in the airways traffic control center. Each panel is part of a small box which can readily be fitted into the controller's station. It includes ten rows of three lights each and an adjacent card holder. The rows of lights correspond to predetermined altitudes at a given fix.

At Boston this fix is a holding point adjacent to the airport from which aircraft are cleared by the tower for landing. As an aircraft approaches the airport on one of the airways, the airways traffic control center clears the aircraft to a particular altitude. As presently arranged the MIE provides for ten altitudes. At Boston these start at 1800 feet and include altitudes to 11,000 feet.

Before clearing an aircraft into the fix, the control center must know that the space is available there. Glancing at the control panel the controller can tell immediately which altitudes are already occupied. Any altitude assigned by the control tower is shown on the control center's MIE panel as a red light meaning this space is not available.

To request space the controller presses the left control button on the panel opposite an unoccupied altitude. Providing the altitude is not already reserved, the ATC controller receives a green light indicating that his request has been granted. The control tower simultaneously gets a red light opposite the altitude in question indicating the space is reserved.

The system is protected by relaying systems which prevent a clear signal from being received if the space requested is already reserved. This is regardless of system failures. The unit is a fail safe type.

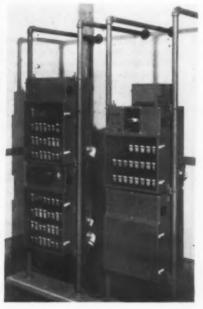
In summary, the controller in the airways center requesting a given altitude pushes the related button. This transmits an automatic coded request to the other control agency, in this case the tower. If the altitude is clear, his request is granted and a green light appears on his control panel opposite that altitude. At the same time a red light appears opposite this altitude on the tower's panel showing that the space is locked.

Blocks Level in Use

Any succeeding attempt to get a clearance on this altitude will fail until the altitude has been cleared by the agency then controlling that



MAIN UNITS of the mechanical interlock equipment installed at Logan International Airzort in Boston. The tower control panel is shown directly in front of the controller
smong non-related equipment. An identical panel is used in the airways traffic control
:enter. The relaying equipment (right) is mounted on another floor below the controller's station.



TECHNICAL NEWS DIGEST

- Boeing Airplane Company has decided against building the Saab Scandia in this country as a possible replacement airplane for the Douglas DC-3, according to W. E. Bealls, vice president—engineering and sales for Boeing. Bealls said the "Scandia is not modern enough in design . . ."
- Regal Air Corp., New York and New Jersey, has started marketing FC-10, the rain repellent developed by the National Research Council of Canada which is said to improve visibility through windshields by as much as 80% as compared to untreated surfaces. It is manufactured by Fiberglas Canada Ltd.
- An Air Force contract for Lear automatic pilots and gyro instruments totaling more than \$3,300,000 has been received by Lear, Inc., Grand Rapids, Mich. This brings the company's current backlog to approximately \$12,000,000, exclusive of the \$400,000 contract for Lear automatic approach couplers recently announced. The Lear autopilot is used in several production model USAF jet fighters.
- The tools and facilities of Warren McArthur Corp., defunct Connecticut manufacturer of aircraft seats, have been purchased by Aerotec Corp. of Greenwich Conn., manufacturer of miscellaneous aircraft valves and controls, and the Thermix Corp., an allied sales organization. Purchase price was \$400,000. Reconstruction Finance Corp., which had about \$1.5 million invested in the company, handled the sale.
- · Northwest Airlines has arranged for the purchase of a Douglas DC-4 from Aerovias Guest, S. A. at an undisclosed price. New ship was intended to replace one of the planes chartered to USAF by Northwest.
- Exactly one year after the first flight of the de Havilland Comet, Britain's four-engine jet transport, the second Comet made its first successful flight on July 27. The second airplane is the first plane off the production line. During this first year the prototype Comet logged over 320 hours' flight time.
- · CAB has established a limited flight navigator certificate to meet the increased navigator requirements of the commercial airlines operating under military contract in the Korean Airlift. military navigators with a minimum of six months' previous experience who can demonstrate their ability to CAA will be granted the limited certificate for a period not exceeding three months.
- The second prototype of the Avro CF-100, all-weather Canadian jet fighter, has made its first flight. Scheduled tour of the first prototype which included participation in the SBAC show in Farnborough, England, in September has been cancelled to speed up the testing program.
- The Martin 2-0-2A's being delivered to TWA have been certificated by CAA for a gross takeoff weight of 43,000 pounds, according to Martin, the highest gross weight ever authorized for a twin-engine transport. This compares with the earlier guarantee of 41,600 pounds gross and the 39,900 pounds at which the Martin 2-0-2's operated by Northwest are certificated.
- · CAB has extended the expiration date on limited mechanic certificates with propeller or aircraft appliance ratings one year to July 31, 1951. This is the rating which is authorized for use by representatives of manufacturers or repair stations directly responsible for the inspection, overhaul or repair of these items.
- A contract valued at approximately \$500,000 has been signed between Eastern Air Lines and Texas Engineering & Manufacturing Co. for the modification of 10 Douglas DC-4 type passenger and cargo type aircraft. Work is scheduled for completion in December.
- Piloting a Lockheed Constellation equipped with special jet stacks, KLM's Captain Wayne Wendall Wilkin established a new trans-Atlantic record on the flight from Prestwick to New York making the trip in 11 hours and 20 minutes. The stacks are said to add 10 mph. to the aircraft speed.

Interlock Installation Schedule

Listed below are the CAA control centers and the related airports with which they will be connected by mechanical interlock equipment. Current plans indicate that most of the installations should be completed within 12-18 months' time.

New York Center

La Guardia Field (2 circuits) N. Y. International Newark Metropolitan Philadelphia International

Washington Center

Washington National Andrews Field Patuxent Naval Air Station Baltimore Friendship

Boston Center

Logan International Airport

Pittsburgh Center

Allegheny County Airport

Cleveland Center

Buffalo Municipal Cleveland Municipal

Chicago Center

Chicago Municipal O'Hare International

Cincinnati Center

Greater Cincinnati Airport

Atlanta Center

Atlanta Municipal Birmingham Municipal

Memphis Municipal

Birmingham Municipal Jacksonville Center

Imeson Field

Detroit Center Willow Run Airport

Minneapolis Center

Wold-Chamberlain

Albuquerque Center

Kirtland A. F. Base

Ft. Worth Center Meacham Field

Love Field New Orleans Center

Moisant International

San Antonio Center

San Antonio Municipal

Denver Center

Staplaton Field

Kansas City Center

K. C. Municipal

St. Louis Center

Lambert-St. Louis Field

Los Angeles Center

L. A. Municipal

Oakland Center

Oakland International San Francisco Municipal

Salt Lake City Center Salt Lake City Municipal

Seattle Center

Seattle-Tacoma Airport

I o

AU

altitude. This altitude clearance was previously obtained by interphone request.

Having secured space for the incoming aircraft at the fix, the control center contacts the pilot via radiotelephone and also places a card holder on the MIE card rack to show the identity of the airplane occupying this space. Small metal pegs hold the card in place opposite the appropriate altitude.

As an aircraft is lowered from one holding altitude to the next, the controller precedes each clearance with a check on the MIE to insure that the lower altitude is available. When the clearance for the next lower altitude is assured by a green light on the control panel, the card holder identifying the aircraft automatically moves down to the space adjacent to its newly assigned altitude. This is a straight mechanical arrangement.

A third light, amber in color, is used to notify the other control agency that an aircraft will soon be turned over to its jurisdiction. When used, the amber light in the agency issuing the warning remains on steady while the light in the agency that is being alerted of the approaching aircraft blinks on and off. Intensity of all three sets of lights can be controlled to meet local needs.

TECHNICAL LITERATURE

AMBROSE ACTIVITIES: An interesting and informative folder describing the activities of Frank Ambrose Aviation Co., aircraft, engine and accessory supplier in Flushing, N. Y., has been published in bi-flugual form. The illustrated pamphlet is printed in both English and Spanish and outlines the company's scope of operations and its policies.

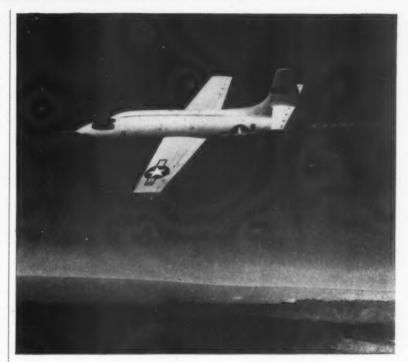
FLOOR PATCHING: The Master Builders Co. of Cleveland 3, Ohio, is circulating an eight-page bulletin titled "Masterquick Method." The illustrated bulletin describes an iron asphalt patching material for resurfacing of worn concrete floors.

CLAMP CATALOG: Wilton Tool Manufacturing Co., 925 Wrightwood Ave., Chicago 14, Ill., has available a 28-page illustrated catalog describing the complete line of Wilton "C" clamps, work positions, etc.

LiQUID GAGE: King Engineering Corp., Box 300, Ann Arbor, Mich., has published a 12-page illustrated bulletin on the King-Gage, a hydrostatic instrument that directly shows the weight, volume or depth of liquids in storage or in process. Suitable for use with solvents, tar, etc., in open.

HOSE FITTINGS: The B. F. Goodrich Co., Akron, Ohio, is circulating a new 12-lage catalog section on the hose couplings and fittings of various types which it nanufacturers. Includes pictures and describe of each type coupling together with recifications, general and maximum pressure recommendations and description of tireads.

FIRE HAZARDS: Randolph Laboratories, Lie., 8 East Kinzle St., Chicago, Ill. has published a 40-page, pocket-sized booklet entitled "Fire Hazard Index." Consists of a list of the correct fire-fighting agents for over 590 fire hazards.



Wind Tunnel in the SKY

The sky is a tough proving ground. In its boundless space, the tiny X-1 became the world's first aircraft to exceed the speed of sound. Now, after more than three years of high speed, high altitude research, the X-1 has completed its mission. Designed and built by Bell Aircraft Corporation, in cooperation with the Air Materiel Command of the U. S. Air Force and the National Advisory Committee for Aeronautics, this rugged speedster joins the select company of distinguished aircraft in the Smithsonian Institute...a group which includes Bell's XF-59—this country's first jet-propelled airplane.

In more than 100 flights, the X-1 collected a tremendous volume of invaluable data. Equally gratifying to its designers, the X-1 responded to every requirement—at subsonic, transonic and supersonic speeds...

Exactly as it came from the drawing boards

Work initiated by the X-1 is being perpetuated by other highly specialized research aircraft designed to probe further into supersonic flight at speeds and altitudes which were considered impractical—and impossible—until the X-1 broke through the barriers.

Immediate successor to the X-1 is Bell's X-1A. The X-1A incorporates a turbine-driven fuel pump designed to enable the plane to fly 1700 miles per hour 15 miles above the earth.

Bell's X-2, a rocket-powered, swept-back wing research aircraft is also being prepared. With heat-resisting stainless steel wings and tail, the X-2 is fast approaching the day when it too will use the sky to increase the fund of scientific knowledge upon which future combat aircraft designs will be based.

And somewhere in the background are more Bell projects destined to carry on in the research tradition of their predecessors.



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Beston, Mass.
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Rechestor, N. Y.
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Dayton, Ohio
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Engine Overhaul Expands Durham's Service Activities

Recently Durham Aircraft Service invested some \$250,000 in absorbing Engine Air Service, located at Mineola, N. Y., into its expanding organization. The new facilities, housed in some 15,000 square feet of shop space, will put Durham in the engine overhaul business handling engines ranging from the four-cylinder Continental to the more powerful P&W R-2000 engine.

The new facilities should increase the scope of service performed by Durham, a company founded in 1944 by R. M. Durham and now handling a yearly gross business of some \$2,000,000. Originally started as a small-scale distributor set-up and in its early years handling primarily war surplus equipment, Durham now is one of the largest outfits in this line.

In 1945 and 1946, 90% of Durham's business represented handling of war surplus equipment. In 1949, 80% of the company's business was made up of sales of new equipment. These sales are handled by the company's main plant at Woodside, N. Y., and the five branches located in Pittsburgh, Detroit, Tulsa, Windsor Locks and at New York International Airport.

Approximately 50% of the yearly gross is taken in at the Woodside plant where Durham maintains its instrument and accessory overhaul facilities. In the two years since its formation in late 1947, the instrument shop, headed up by John Marrotte, has overhauled more than 9,000 instruments. Over 5,000 of these were for USAF planes engaged in the Berlin Airlift.

Instrument Work Growing

Durham is expanding its activities in the instrument overhaul and service field at a fast pace. Some of the perators doing business with Durham's instrument shop are Air France, Scandinavian Airlines, Stratoreight, Transocean, Seaboard and Vestern, and LAV, plus special confact work with Grumman and the Mayy.

In recent months Durham has anufactured a special instrument overhaul shop on wheels. Built as a ampletely independent service shop, the entire unit is housed in a trailer tuck body. Stationed at the airport the Durham instrument trailer makes a possible for service crews to check at any type of electrical, mechanical convacuum instrument plus many

types of accessories right on the scene.

In the event that the trouble can be remedied by minor servicing or adjustment, the Durham servicemen can remedy the situation immediately and return the unit to service. If necessary, and with positive proof that the trouble is in the unit, they'll replace it with one from their own stock and send the faulty unit back to the Woodside shop for complete overhaul.

Has Integral Power

The instrument trailer is an interesting achievement. It was built up entirely from surplus equipment, from plans drawn up by Marrotte, at a minimum cost. In an isolated forward compartment a special generating plant provides the shop with its main source of power. There are benches adapted for every type of work available: electrical compass test bench, gyro instrument turntable, autopilot rocking test platform, a drive motor and special adaptors for testing all types of tach generators, manometers for every type of check, and electrical test apparatus of every description.

This isn't simply a collection of equipment. Every item is laid out to serve a particular purpose in the most efficient manner. When the men are inside the trailer a sizable work bench can be lowered into place across the door. This bench has six drawers for tools and equipment. Another smaller bench is provided across the forward end of the trailer

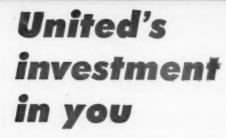


Engine Overhaul—Through the purchase of Engine Air Service at Mineola, L. I., Durham acquired an engine overhaul shop complete and operating, with two USAF contracts. Facilities, which include five test cells, are adequate for testing engines ranging from the four-cylinder Continental to the I,450-horse-power P&W R-2000.



Instrument Trailer—This inside view of Durham's mobile instrument trailer gives some idea of the compactness of the unit which is used at the airport for testing instruments prior to replacement. With the equipment shown here Durham can test almost any type of electrical, vacuum, or mechanical instrument and some accessories. Note the air conditioning units at the far end of the trailer and the wide assortment of test equipment along all three walls.

ON



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AIR LINES



Advanced Trainer—Here are the planes the new crop of Air Force pilot traines will be using in advanced training—the North American T-28, successor to the World War II T-6 Texan. The T-28 has greatly improved performance over previous training types and is designed to provide a more rapid transition into jet aircraft than has previously been possible. Fourteen of the new ships are shown here awaiting delivery at North American's plant in Los Angeles, Calif.

and each test stand has some working area.

The trailer is air conditioned and well lighted with fluorescent lamps. Some idea of the possibilities of this unit might be obtained in the fact that the Air Force has expressed interest in it with the idea that it might be incorporated in a pod type unit and flown into distant military airports for instrument work.

In-Place Testing

The instrument trailer is an interesting approach to a long-standing problem of testing instruments on the spot to prevent the useless removal and shipment of instruments which appear to be malfunctioning when the actual difficulties lie in related system components. It is too early to predict how it will work out in service.

The instrument trailer is one indication of the scope of Durham's interests. Others are the \$200,000 inventory on Durham stock shelves across the country, its 14 sales people who spend their full time on the road insuring the best possible sales and service for the Durham customer, and the company's recent expansion into engine overhaul work to make their service all-inclusive.

At one time Durham operated nine airplanes in the conduct of its business. This fleet included one twin-

Extra Section

By William D. Perreault



THE MILITARY services have adopted the term "flight computer systems" to designate instruments of the Zero Reader type originally introduced by Sperry. The name Zero Reader is a patented trade mark and will long be associated with the first real new development in aircraft instrumentation in many years. As noted elsewhere in this issue, CAA has granted KLM the first approval to use the Sperry Zero Reader in commercial operations and two types of military fighters are now being equipped. To our knowledge the only other present-day commercial instrument to fit this category is the Collin's Pilot Control Indicator, another promising instrument now being tested. If the name sticks it will be a good one to remember for these instruments have a place in the future.

During the ATA Conference at Kansas City several airlines gave prominent mention to Nukemite #40, an effective coating to prevent corrosion in wing wells, storage battery compartments, buffets, lavatories, etc. Now the Nukem Products Corp., Buffalo 20, N. Y., has available a new pamphlet describing the Nukemite series of protective coatings and tank linings. The illustrated pamphlet has useful information on the properties and application of these products.

In the August 1 issue I referred to RTCA's Special Committee 50 and noted that it was chairmanned by ATA's Vernon Weihe. Actually this special committee is under the chairmanship of AOA's Bill Schrader. The error was discovered before the magazine was circulated but too late to correct the printing. Our apologies to both men, neither of whom realized we were referring to the committee's work in the navigation story.

Maintenance men charged with responsibility for passenger loading ramps and other installations requiring neat appearing guide chains will be interested in a new group of styled chains made of aluminum and specially processed to simulate gold, silver, nickel, brass, copper and chromium in red, blue, gray, green, brown, black and various pastel shades. The chains, with high corrosion and abrasion resistance, have been introduced by Colonial Alloys Co., Philadelphia 29, Pa.

General Electric has designed a new four-watt lamp which produces ozone, which is capable of neutralizing many objectionable odors. The present model was designed for use in automatic clothes dryers to give clothes that fresh, clean smell. The lamp, which is effective in areas up to 1,000 cubic feet, should show considerable promise in aircraft applications in place of some of the present deodorizing systems which require frequent servicing. The ozone produced by the lamp is said to have some germicidal effect.

Having had some experience with conditioning airplanes which were out of service for six or seven months, we can appreciate some of the problems which the USAF can expect when it tries to rush into service some of the airplanes which have been in "mothballs" several years. There are just too many parts that deteriorate from age only in addition to those which rust from condensation and heat, sealed instruments and accessories which lose their lubricants, rubber seals which dry up and permit leaks, etc.

In mentioning available anti-skid devices in this column three issues back, I referred to the units being built by Westinghouse Air Brake and AiResearch. As you probably realize, it is not AiResearch but Hydro-Aire that is manufacturing the Boeing-designed anti-skid device. Incidentally, in his talk before the IAS since that time, CAA's George Haldeman referred to the possibility that such devices might be required on civil transports to combat higher landing speeds and accompanying ills.



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KOLLSMAN AIRCRAFT INSTRUMENTS



OPERATIONS & MAINTENANCE

engine Beech. With the business now well established and the need for travel between the branches minimized by better organization, the fleet of airplanes is no longer used.

R. M. Durham, president and founder of the company, now makes his headquarters in Tulsa. Activities at the main office in Woodside, Long Island, are under the direction of Frank Fisher, vice-president of sales, while A. W. Daniels is vice-president and treasurer of the organization. In the field Durham has branch managers to handle each of its offices.

CAA Merging Towers With Airway Radio in 16 Cities

In a move that will speed up service to the public and at the same time save the government more than \$100,-000 a year, the Civil Aeronautics Administration last week ordered the consolidation of airport traffic control towers and airway communications stations at 16 smaller airports.

The consolidation, possible only at airports with not more than 5,000 or so landings and take-offs per month of all types of aircraft, will result in the elimination of a minimum of two employes and the average saving per consolidated station will be nearly three persons.

At such stations, the communications equipment will be moved physically into the control towers except for the portion that can be operated by remote control. Further economies will be effected in equipment and in general administrative costs.

In services to the public, this concentration of the two most widely used CAA operational facilities will provide a focal point for the handling of calls, thus speeding up replies to queries and eliminating the problem of coordination between two separate offices.

Satisfactory Tests

Found satisfactory in tests at Lynchburg, Va., and Colorado Springs, the combined operation has since been affected at Augusta, Ga., and will shortly be put into effect at the following other points:

Big Spring, Tex.; Bismarck, North Dakota; Brownsville, Tex.; Burlington, Vt.; Columbia, S. C.; Duluth, Minn.; Helena, Mont.; Pocatello, Idaho; Portland, Me.; Sioux City, Iowa; Sioux Falls, S. D.; Topeka, Kansas, and Tri-City, Tennessee.

Personnel manning the combination tower-stations will be qualified both as communicators and traffic controllers, and a training program to provide these dually-proficient operators will be set up by the CAA.

Trend Favors Use of Civilian Facilities For Military Aircraft Maintenance

The Korean conflict has shifted military thinking in favor of use of civilian maintenance facilities for overhaul and reconditioning of military aircraft.

When the Armed forces appropriations bill was under consideration, Congressman Carl Hinshaw stated before the House that in the year ahead, the Air Force plans to repair 2,342 aircraft in depots and only 293 by contract.

The Senate Committee Report accompanying the General Appropriations Bill for 1951 took into consideration that depot work is valuable training for military personnel but added, "After consideration of all factors involved, the Committee believes that it is essential to an adequate mobilization base for the Air Force that commercial contractors be utilized to the greatest extent consistent with the national security."

Now, operational demands of the Air Force are certain to result in additional contracting for civilian maintenance work. However, any contracts let in fiscal 1951 will be considered security information and will not be publicized by the Air Force.

Prior to July 1, however, the following maintenance contractswhich are still in effect-had been

Company	Type Aircraft	Amount	Contract Date
Texas Engineering and Mfg. Co C-!	4 reconditioning	\$1,655,199	May 25
Texas Engineering and Mfg. Co T-6			
Texas Engineering and Mfg. Co F-			June 30
	torage		
Texas Engineering and Mfg. Co C-1	7 modification	231,408	June 19
Pacific Airmotive CorpT-		724,104	June 7
Pacific Airmotive Corp F-5		2,500,000	June 30
	torage		
Lockheed Aircraft ServiceF-	l removal from	1,422,524	June 26
Grand Central Aircraft Co T-6	reconditioning	1,036,681	June 8
Grand Central Aircraft Co F-5	1 removal from	6,884,460	June 30
S	orage		
Grand Central Aircraft Co B-2	9 removal from orage	6,250,000	June 30
Curtiss-Wright Corp., Airplane Div B-2	9 removal from orage	6,000,000	May 31
North American AviationT-6	reconditioning	8,971,492	June 28
Boeing Airplane CoYC		437,239	June 30
Slick Airways		1,040,000	June 30
Douglas Aircraft Co B-1		7,500,000	June 30

AMONG THE SUPPLIERS

Jack P. Pedersen has been appointed eneral manager of the Warner Aircraft

Corp. by Clinton Machine Co., the arent organizaon which earlier his year pur-hased the corpoation in an exhange of stock. Oliver ardner has been amed assistant to Don Thomas, presiof Clinton

Pedersen fachine Co., and

will act as liaison for Warner with govunment and industry.

Alpheus S. Holmes, formerly eastern region manager, has been named anager of General Motors' AC Spark Plug Division's Pacific coast region succeeding the late Eugene B. Powell. Edward F. Hanlon succeeds Holmes as . John R. eastern region manager . . Griffin has joined the technical staff of the Du Pont Petroleum Chemicals Div. Wilmington, Del., as aviation consultant, specializing principally in fuel and lubrication problems in aviation ... The Scintilla Magneto Div. of Bendix Aviation Corp., Sidney, N. Y., has transferred Roger B. Merritt to its Detroit office to assist in coordinating all of the division's sales and engineering activities in Michigan, Indiana and Ohio.

Zenith Plastics Co., Gardena, Calif., has appointed Frank Wallis to its sales staff. He will work in the aircraft in-dustry handling Zenith's laminated plastic products.



Finest Flight To Latin America

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For a limited time only we have DRASTICALLY REDUCED PRICES on a wide variety of NEW, famousname parts and accessories. Write, wire, or phone your requirements in the following lines of merchandise-

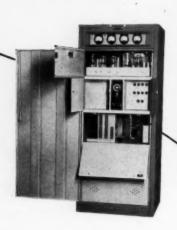
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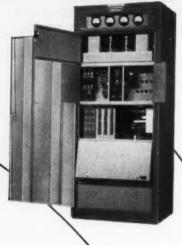
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All components meet the latest JAN (Joint Army-Navy) specifications. This means maximum resistance to wear, corrosion, humidity, fungus, temperature, and time. Thus, equipment failure is minimized and maintenance and replacement costs are reduced to the absolute minimum.

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Humidity—equipment performs normally at 100% humidity with condensation.

Altitude—equipment operates at full power at altitudes up to 10,000 feet (3,048 meters), and withstands shipping altitudes up to 30,000 feet (9,144 meters).

NEW... UNIT CONSTRUCTION PROVIDES OPERATING FLEXIBILITY

A flexible, multifrequency station can be formed from a combination of 96D and 96-200C Transmitters, one or two 50H Modulators and a 36D Rectifier. This provides for either simultaneous transmission on several frequencies or the selection of an individual frequency best suited to your particular communication problem.

NEW... FRONT CONTROLS PROVIDE ADJUSTMENT CONVENIENCE

All controls are located on the front of the transmitter: all R. F. stages and antenna tuning, under and overload and tone-keying adjustments, selection switch for external frequency shift excitation, rotary meter switch, exciter output control.

NEW... DRAWER-TYPE CONSTRUCTION Means Easy Maintenance

Ball bearing, drawer-type construction permits the transmitter to be quickly withdrawn from cabinet. All components are instantly accessible . . . no components are hidden or buried.

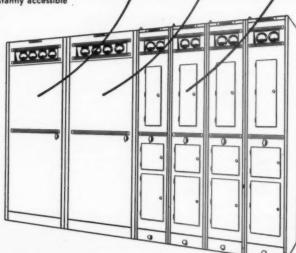
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COMPLETELY NEW

96 Series

Transmitting Station
2-18 mc/s 2500 Watts

Linear Actuator

Rhodes Lewis Co., 3652 Eastham Drive, Culver City, Calif., is manufacturing a quick-stop, linear actuator for operation of aircraft pilot canopies. The actuator,



which opens and closes a 150-pound canopy, has a clutch and brake arrangement which permits a stop within five degrees rotation of the output shaft. Powered by a 24-volt D.C. motor developing 1/10 horsepower at 10,000 rpm.

Retriever

Herbrand Div., Bingham-Herbrand Corp., Fremont, Ohio, has announced a tool for retrieving nuts, bolts, etc. which have been dropped in inaccessible spots. It consists of a strong permanent magnetic head 3¼-inch long and ½-inch in diameter. It will pick up tools weighing up to 2½ pounds, the manufacturer claims. The head is adjustable to any angle and the handle has a knurled safety grip. Weight of the unit is 8 ounces.

Jeep Fire Truck

Ansul Chemical Co., Marinette, Wisc., is marketing a jeep fire truck which carries 340 pounds of dry chemical for use in combatting liquid, gas and electrical fires. Designated the Ansul model 340-J, the unit has a 390-pound tank of dry chemical and can be equipped with either one or two 50-foot hose lines connected directly to this tank. These hoses may be operated together or singly. All fire equipment controls may



be worked from the driver's seat of the standard Universal Jeep, Model CJ-3A. This jeep has six speeds forward, two in reverse, and a top speed of 60 mph. Turning radius is 18 feet. Overall width is 67 inches, height 69 inches and length 127 inches.

Motorized Sweeper

Wayne Mfg. Co., Pomona, Calif., has developed an enclosed, flush-bodied motorized tri-wheel sweeper equipped with a new type vacuum dust control system. The unit sweeps a 42-inch swath at six mph and is capable of sweeping 100,000 sq. ft. per hour, the manufacturer claims. Powered by a 7½-horsepower engine, the unit features automotive steering control and is capable of 90-degree turns. The sweeper is driven off both front wheels through an assembly which provides, neutral, forward and reverse gear speed reducer and differential in one-gear case. Over-all dimensions: 46½" wide, 80" long and 52" high.

Power Supply

Industrial Electronics & Transformer Co., 8655 South Main St., Los Angeles, 3, Calif., has introduced an electric, self-propelled gasoline engine generator. The INET ground power supply uses a 28-volt DC generator as a power source and to drive an electric motor which powers the propelling unit. This



provides dependable electric drive without complex transmissions and clutch assemblies. Three forward speeds and reverse are provided with a foot accelerator and stand-up wheel steering. Speeds up to 15 mph. Model shown is rated at 750 amperes continuous at 28 volts DC with momentary inrush rating of 1,700 amperes. Models available in ranges from 500 to 2,000 amperes continuous at 28 volts DC.

Insulated Grommet

Automotive Rubber Co., 8601 Epworth Blvd., Detroit 4, Mich., is marketing a metal formed grommet completely cov-







ered with rubber for insulating blanked holes in metal to prevent cutting, chafing, shorting, etc. Known as the ARCO "Sta-Put" grommet, the new unit is installed from the face of the hole using an expanding hand tool made available by the company to roll and force the curled prongs tight against the undersurface. Data sheets available on request.

Phase Converter

Eastern Air Devices, Inc., 585 Dean St., Brooklyn 17, N. Y. has designed a rotary type phase converter designed to convert single-phase 400 cycle to three-phase 400 cycle. The P31 E unit is two



inches in diameter, 3 3/32 inches long and weighs 16 ounces. For power factors ranging from 100% to 60%, a balanced, three-phase output can be obtained for a given load condition, the manufacturer claims. It can deliver as high as 30 volt-amperes with unbalance not exceeding 10%. Suitable for use in gyroscope systems, rectifier units, frequency control circuits, control systems and electronic equipment.

Shop Desk

Berger Manufacturing Div., Republic Steel Corp., Canton, Ohio, is marketing



new desk for shop personnel. It is 33 inches wide, 28 3/4 inches deep and 43 inches high in front and 521/4 high inches in The height back. includes a seveninch hood across back. the The drawer is 231/2 inches wide, inches high and 26

inches deep. Shelves are provided under the hood for records, etc. A tray is provided between the legs and is bolted in such a manner that it can be reversed to provide a smooth top shelf. Finished in baked green enamel.

Rectifiers

Bradley Laboratories, Inc., 82 Meadow St., New Haven, Conn., has announced a new series of hermetically sealed cop-



per oxide rectifiers for instrument use. Claimed by the manufacturer to be the smallest hermetically sealed precision rectifiers available, the sealed container is 11/16 inches wide by 9/16 inches high and ¼ inch deep. They are supplied with either conventional bridge, center tap, half-wave circuits or as balanced and matched units for modulators and related equipment. CX3 models are rated up to 6 volts AC and 5 milliamperes DC.

Foreign Air Carriers Exploit CAA Loophole

By WILLIAM V. HENZEY

IN SHARP contrast to the staid and usually extensive procedures outlined for domestic and foreign firms desiring U. S. airline "licenses" is an almost unbelievably simple method by which owners of foreign aircraft receive authority to operate, collectively, one of the largest airline systems in the world—to and from the United States.

This vast network of lines does not embrace any certificated U. S. carriers nor the scheduled operations of established foreign lines to which the Civil Aeronautics Board has issued foreign air carrier permits. In fact, it does not embrace the American non-scheduled industry.

It is made up of such as Silver City Airways, Ltd., Lyon Air Ltda., one Manuel Contreras of Tijuana, Mexico, and countless others which are not burdened with world-wide recognition. Significantly, however, it does count quite heavily also on "off-line" charter services conducted by major foreign lines, such as Sabena, El-Al Israel, Trans-Canada, and Aerovias Guest, to name a few.

100 Flights Per Week

Collectively, this group of lines operates an average of over one hundred flights per week to, from, or beyond every gateway in this country. By actual count, during a four-week period extending from May through June this year, the daily average of flights was 16 on which passengers, cargo, or both were transported.

Their authority and the simple method by which they acquire this authority stems from a remote section of the Air Commerce Act of 1926, most of which has been superseded by the present Civil Aeronautics Act. Section 6(c) of the former conveys authority to the Civil Aeronautics Administration to authorize "aircraft registered under the law of a foreign nation . . . to be navigated in the United States" in air commerce.

Air commerce is considered to be so-called "non-common carriage" or "contract carriage" while air transportation governed by the Civil Aeronautics Act relates generally to common carrier activities such as conducted by the regularly scheduled lines.

Therefore, if a foreign aircraft owner can establish the airworthiness of his equipment and can give substantial evidence of a contract to perform a flight or flights he is, upon application to CAA, given what is commonly called a 6(c) permit.

Renewable Permits

Generally, these permits, which are renewable, are valid for a maximum of 30 days and one may cover as many as 100 round-trip flights for from one to ten contracting parties. During June they were conducted for such as Sears, Roebuck & Co., Westinghouse Electric, U. S. Department of the Interior, Socony-Vacuum Oil Co., International Nickel Co., and many others.

As an example, a company known as Rutas Aeros Nacionales of Caracas, Venezuela, was awarded a permit on April 26 to operate "approximately 100 round-trip flights" between points in Venezuela and Miami. Arrangements were with seven Caracas concerns, one from Colombia, and Sears, Roebuck and Westinghouse Electric in the U. S., all for the carriage of cargo. The permit was renewed one month later.

Similarly, Maritime Central Airways, Ltd. of Canada was issued a permit, effective July 1, authorizing "approximately 25 flights per week" between Charlottestown, Prince Ed-

ward Island, Canada, and Portland, New York, of Boston for the carriage of southbound loads of strawberries under contract with the Charlottestown and Mt. Stewart Strawberry Growers Associations.

Manuel Contreras, for at least the past year, has been receiving monthly permits, each authorizing 20 flights between San Diego or Los Angeles and various points in Mexico. Transported are shipments of seafood and food products under contract with a company known as San Diego Sky Freight.

Lydda Tourist Flights

In the trans-Atlantic field, for example, El-Al Israel, now the holder of a CAB-issued foreign air carrier permit, was issued a 6(c) permit by CAA on June 23rd to operate "tourist" flights between New York and Lydda. Significantly, these operations were considered "non-common" carrier although proposed similar operations of U. S. carriers were considered to be common carrier flights subject to special CAB approval.

This has occasioned no end of dismay on the part of U. S. airlines who cannot wholeheartedly agree that



Take New Posts—Newly appointed regional sales managers for Northwest Airlines discuss with Amos Culbert, vice president-sales, details of a reorganization of NWA's sales department. Standing, left to right, are: Dean J. Hanscom, formerly western sales manager and now western regional sales manager; R. G. Collins, former district sales manager at Detroit, now manager of the central region; and K. D. McKenzie, former European director of the company and now eastern regional manager. Donald J. King continues to head the Orient region.

CAB, despite its assertions, is empowered to regulate the charter activities of the U. S. industry, although it is doing just that today.

Actually, when a 6(c) permit application is filed, CAA passes it on to CAB for a ruling on whether or not the proposed operation is technically "air commerce" or "air transportation." When a permit is issued, therefore, it is a fact that CAB has found the operation, in its opinion, to be "air commerce."

Reciprocal Rights

The fairness of the governing act is unchallenged since U. S. lines do perform special flights to and from foreign countries and reciprocal benefits are in order, but the consistency of CAB's decisions on what consitutes "air commerce" and "air transportation" is not considered entirely advantageous to the U. S. scheduled and non-scheduled carriers.

In defining the type of operations for which 6(c) permits will be issued, CAA advises applicants that "operations must be conducted in performance of a limited number of contracts. Generally speaking, not more than eight to 10 contracts may be permitted and any transportation engaged in shall be under these contracts."

Further, CAA advises, "contracts must be of such nature as to insure that the contractor is not, in fact, acting as a freight forwarder or in some similar capacity and there must not be a general or rapid rotation of such contracts."

Despite this, in the Manuel Contreras-San Diego Sky Freight case, for example, the same general contract has been renewed each month for at least a year.

To what extent some of these lines are transporting traffic that could be carried by U. S. lines and foreign-permit holding carriers is undeterminable, but it's an obvious fact that the collective group of 6(c) permit carriers participate substantially in the movement of traffic to and from the United States—with red tape at minimum.

1949 Airline Salaries Reported to CAB

The following salaries, stockholdigs, and remunerations have been eported by the airlines to the Civil eronautics Board for calendar 1949.

American Overseas Airlines, Inc.

C. R. Smith, pres. and dir., no salary, and shares common; H. R. Harris, v. p. and n. mgr. and dir., \$30,000 salary, \$190.36 down \$62.74) bonus and indirect, and 1,100 ares common; R. E. S. Deichler, v. p. and Cr. no salary, \$240.39 (down \$3.16) bonus

Over the Counter

Sales Promotion

TRAVEL agents generally are not receptive to the idea of encouraging installment buying of vacation travel on the part of their clients, says the American Society of Travel Agents after querying 100 of its members. As reported in ASTA Travel News, 54% of those queried turned thumbs down on selling travel on credit, 39% mention the availability of credit plans "occasionally," while 7% make it a general practice to explain to customers how they can arrange loans. ASTA said it was apparent that agent's reaction depended on the type of clientele served—those catering to deluxe patronage were against; those serving lower income groups, especially civil service employes, were more receptive.

Capital Airlines is distributing an attractive colored folder on its new Constellations, entitled "Queens of all the Air" . . . Southwest Airways is using high-class talent for spot radio announcements on the west coast. Jimmy Stewart, motion picture star, is Southwest's announcer on the air. Incidentally, he's a stockholder . . . Eastern Air Lines, in a direct mail piece, is again pushing the Manhattan-Washington merry-go-round, featuring 30 flights on the route every business day, including 12 Constellations . . . British Commonwealth Pacific Airlines is direct-mailing "Beauty Sleep—3 Miles High," a catchy folder describing its DC-6 sleeper service to Australia and New Zealand.

Passenger Service

I NTENDED as both a service item and a sales-promoter, Pioneer Air Lines is now giving each baby traveling on its airplanes a pair of shoes, through arrangements with the Curtis Shoe Co., Temple, Tex. The program will continue through the remainder of the year. Says Pioneer: "If baby needs a new pair of shoes, fly Pioneer."

Traffic and Services

C APITAL Airlines placed its new Constellations and Super DC-3's in service on July 28. The Connies are operating one non-stop round-trip daily Washington-Chicago, while the DC-3's are providing a three-stop service Washington-Atlanta via Richmond, Greensboro-High Point and Asheville... Braniff Airways on Aug. 1 added a third DC-6 schedule daily between Chicago and Dallas. New schedule gives Wichita its first DC-6 service... British Overseas Airways Corp. on Aug. 2 added a second non-stop New York-London Stratocruiser flight, bringing its total schedules between the cities to nine weekly. New trip leaves New York on Thursdays and London on Wednesdays... All American Airways on Aug. 1 resumed service to State College, Pa. Flights were discontinued Mar. 15 due to airport conditions.

The U. S. has agreed to allow Air France to fly into Miami on a regularly-scheduled basis as part of its Caribbean operation, in exchange for Pan American World Airways' use of Nice as an alternate to Marseilles. Air France's Caribbean route is now listed as Martinique via Guadeloupe and via intermediate points to Puerto Rico and beyond via the Dominican Republic and Haiti to Miami. On July 27, Air France re-established service (once every two weeks with Constellations) between France and Point a Pitre, Guadeloupe, and Fort de France, Martinique, via New York (no passengers carried out of New York). No date has been set for Miami service.

Eastern Air Lines and The Flying Tiger Line have signed an interline airfreight agreement permitting through billing of freight over either carrier to any point served . . . Pan American World Airways has lowered seating capacity of its DC-4 New York-San Juan tourist planes from 63 to 61. Rear compartment is being reconverted into a galley to improve food and drink service, PAA said . . . TWA has opened a new sales and executive office in London at 200 Piccadilly, W.1.

Furniture Manufacturers Association of Southern California has formed an airfreight shipping pool which will enable consolidated shipments of its 110 members to move east at advantageous rates. FMA has operated a similar railroad and truck shipping pool for its members for a number of years. Under the plan, FMA will pool shipments at Los Angeles and forward them to Chicago and New York via The Flying Tiger Line at rates that are said to be less than rail LCL rates in many instances after savings in crating costs are taken into account.

-ERIC BRAMLEY

TRAFFIC & SALES

and indirect, and 500 shares common; L. G. Fritz, v. p., no salary, and no shares; C. W. Jacob, v. p. and dir., no salary, \$240.39 (up \$48.98) bonus and indirect, and no shares; William Littlewood, v. p., no salary, and 200 shares common; O. M. Mosier, v. p. and dir., no salary, \$185.72 (up \$185.72) honus and indirect, and no shares; R. W. D. Smith, v. p., no salary, and no shares; W. J. Hogan, v. p. and comptroller, no salary, and no shares; J. G. Flynn, ass't v. p., \$16,000 (up \$388.93) salary, and no shares; W. H. Miller, ass't v. p., no salary, and no shares; Carlene Roberts, ass't v. p., no salary, and no shares; Grant Titsworth, sec'y-treas., \$8,919.35 (up \$1,808.16) salary, and no shares; Kenneth Murdock, ass't sec'y and ass't treas., \$8,446.30 (up \$1,296.31) salary, and 450 shares mon; C. A. Jervis, ass't treas., \$8,051.61 (up \$1,084.95) salary, and 50 shares common; M. L. Cardman, ass't sec'y, \$6,054.49 salary, and no shares; T. W. Bowers, dir.¹, no salary, \$137.52 bonus and indirect, and no shares; H. M. Gillespie, dir., no salary, \$167.54 (down \$32.44) bonus and indirect, and 100 shares common; J. A. Jackson, dir., no salary, \$212.38 (down \$34.99) bonus and indirect, and 5,000 shares common; Slater, dir.3, no salary (down \$8,861.11), bonus and indirect none (down \$138.11), and shares common; R. S. Damon, v. p. and dir.2, no salary, bonus and indirect none (down \$208.57), and no shares; H. D. Starr, sec'y and treas.2, \$1,000 (down \$11,000) salary, and 600 shares common; G. Van Nostrand, ass't v. p.3, no salary, and no shares; G. J. Grandewelde, v. p., no salary, and no shares; G. K. Griffin, v. p., no salary, and no shares; J. M. Eaton, v. p., no salary (down \$3,750.00), and 500 shares common.

¹ Died March 16, 1950.

² Resigned January 21, 1949.

³ Resigned October 15, 1949. Lybrand, Ross Bros. & Montgomery, New York, N. Y., auditors,

Arthur Anderson & Co., New York, N. Y., auditors, 1949 36,624.25

& Shorb, Washington, D. C., legal fees and expenses, 1949 38,689.55

Challenger Airlines Co.

Donald A. Duff, pres. and dir., \$15,083.26 (up \$3,426.62) salary, 15 shares common; H. Lynn Graham, treas. and dir., \$6,925.00 (up \$1,975) salary, 15 shares common; L. W. Linville, sec'y, \$3,125.00 salary, 250 shares common; Randal Young, dir., no salary, and no shares; H. S. Darr, dir., no salary, and 224.000 shares common.

Eastern Air Lines, Inc.

E. V. Rickenbacker, pres. and dir., \$35,000 salary; \$5,561.41 (up \$199.62) director fees, retirement plan contributions, bonuses and indirect compensation; 100,000 shares common; Paul H. Brattain, 1st v. p. and dir., \$27,000 (up \$750), salary; \$4,068.57 (up \$428.31), bonus and indirect; 19,000 shares common; Sidney L. Shannon, 2nd v. p. and dir., \$25,000 (up \$1,250), salary; \$2,788.81 (down \$3.04), bonus and indirect; 8,000 shares; T. F. Armstrong, sec'y, treas. and dir., \$17,500 (up \$625); \$2,247.59 (up \$62.71), bonus and indirect; 3,008 shares; J. W. Moore, ass't sec'y, ass't treas. and dir., \$12,000 (up \$600); \$1,531.90 (up \$1.90), bonus and indirect; 500 shares; L. P. Arnold, v. p., \$17,500 (up \$625); \$2,025.92 (up \$129.53), bonus and indirect; and 2,600 shares; M. M. Frost, v. p., \$22,500 (up \$625); \$2,182.28 (up \$1,183.15), bonus and indirect; and 300 shares; Stanley de J. Osborne, v. p. (resigned), \$22,500 (up \$625); \$1,763.90 (up \$137.74), bonus and indirect; and 240 shares; Everett R. Cook, dir., no salary; \$400.00

bonus and indirect; and 1,300 shares; James M. Cox, Jr., dir., no salary; \$400.00 (up \$100), bonus and indirect; and no shares; Paul M. Davis, dir., no salary; \$200.00 (down \$100), bonus and indirect; and 2,800 shares; George B. Howell, dir., no salary; \$400.00 (down \$300), bonus and indirect; and 2,000 shares; Hugh Knowiton, dir., no salary; \$600.00 (down \$200), bonus and indirect; and 100 shares; Glenn H. McCarthy, dir., no salary; \$100.00 (down \$400), bonus and indirect; and no shares; Wiley L. Moore, dir., no salary; \$100.00 (down \$400), bonus and indirect; and 400 shares common; S. Peabody, Jr., dir., no salary; \$500.00 (up \$200), bonus and indirect; and indirect; and 1,000 shares; Paul E. Reinbold, dir., no salary; \$400.00 (down \$300), bonus and indirect; and 3,000 shares; L. S. Rockefeller, dir., no salary; \$600.00 (down \$300), bonus and indirect; and 60,000 shares;

1949 accrual-year end billing not received.

Empire Air Lines, Inc.

Joe Lux, pres., no salary, 708 shares common, and 47,459 shares preferred; T. E. Robinson, v. p., \$4,800 salary, and 300 shares common; Arvid R. Nelson, sec'y and treas., \$3,600 salary, 10 shares common, and 670 shares preferred.

Helicopter Air Service, Inc.

T. H. Reidy, pres., treas., dir., \$12,000 salary, and 19,375 shares common; V. H. Harding, v. p.-dir., no salary, and 4,800 shares common; C. E. Cessna, sec'y-dir., no salary, and 250 shares common; T. C. Rodman, dir., no salary, and 5,075 shares common; J. W. Newey, dir., no salary, and no shares; R. B. Kiel, ass't sec'y, ass't treas., \$4,569,91 salary, and no shares.

Mid-Continent Airlines, Inc.

T. F. Ryan III, chrm.-bd. of dir., no salary, bonus and indirect none, and 81,090.3 shares common; J. W. Miller, pres. and gen. mgr., \$24,999.84 (up \$655.94) salary, \$731.05 bonus and indirect, and 1,958 shares common; J. C. Collins, v. p. and see'y, \$9,999.84 (down \$567.19) salary, \$292.69 bonus and indirect, and 450 shares common; J. A. Cunningham v. p. oper., \$13,000.00 (up \$382.81) salary, \$353.32 bonus and indirect, and 275 shares common; H. W. Coburn, v. p. traf. and sales, \$10,999.84 (up \$432.18) salary, \$648.26 bonus and indirect, and 625 shares common; C. H. Calhoun, v. p. eng. and maint., \$10,999.84 (up \$501.75) salary, \$228.74 bonus and indirect, and 625 shares common; W. L. Walker, treas., \$9,000.00 (up \$775) salary, \$117.18 bonus and indirect, and 50 shares common; W. D. King, ass't treas, \$5,800.00 (up \$406.25) salary, \$80.25 bonus and indirect, and 50 shares common; W. D. King, ass't treas, \$5,800.00 (up \$406.25) salary, \$80.25 bonus and indirect, and 175 shares common; W. W. Howes, dir., no salary, bonus and indirect none, and 2,000 shares common; T. N. Law, dir., no salary, bonus and indirect none, and o shares; E. C. Epply, dir., no salary, bonus and indirect none, and 2,500 shares common; V. F. Rotering, dir., no salary, bonus and indirect none, and 2,500 shares common; V. F. Rotering, dir., no salary, bonus and indirect none, and 200 shares common; Ryal Miller.



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dir., no salary, bonus and indirect none, and 1,000 shares common; J. H. Blaffer, dir., no salary, bonus and indirect none, and 16,600 shares common; Milton Mc-Greevy, dir., no salary, bonus and indirect and 3,700 shares common; Jan H. Tillisch, dir., no salary, bonus and indirect none, and no shares; G. D. Murdoch, dir., no salary, bonus and indirect none, and 1.000 shares common.

Bonus and indirect compensation includes participation in Employes' Stock Purchase

J. W. Cross, Washington, D. C., general counsel, 1949 \$16,000.00

Robinson Airlines Corp.

Robinson Airlines Corp.

Robert E. Peach, exec. v. p., \$10,000 (up \$7,480.42) salary, and 626 shares capital;
John R. Carver, v. p. and sec'y., \$8.440 (up \$6,095.14) salary, and 518 shares capital;
William J. Fields, treas., no salary, and no shares; H. Stuart Goldsmith, ass't treas., \$4.400 salary, and no shares; Jane S. Everhart, ass't sec'y, \$2,658 salary, and no shares; Bertram J. Miner, chrm.-bd., no salary, and no shares; James S. Ely, dir., no salary, and no shares; Charles F. Johnson, dir., no salary, and no shares; Dorothy son, dir., no salary, and no shares; Dorothy H. Robinson, dir., no salary, and 1,666% shares capital; L. Nelson Simmons, dir., no salary, and 350 shares capital; Ralph C. Smith, dir., no salary, and 400 shares capital; E. V. Underwood, dir., no salary, and 2,500 shares capital; T. P. Wright, dir. no salary, and no salary, and no salary, and no shares; C. S. Robinson, dir. (resigned June 3, 1949), no salary, and 3,08516, shares capital. 3,0651/4 shares capital.

-CAB CALENDAR-

Aug. 16-(Docket 3966 et al.) Hearing in reopened West Coast Airlines Certificate Re-newal-United Air Lines Suspension Case. 10 a. m., South Lounge, Carlton Hotel Washington, D. C. Examiner J. Earl Cox. Postponed from July 26.

Aug. 16—(Docket 4366) Hearing on application of Trans-Pacific Airlines, Ltd. for certificate amendment to authorize trans-portation of mail. 10 a. m., Conference Room "C," Departmental Auditorium, Con-

Room "C." Departmental Auditorium, Constitution Ave., Washington. Examiner Thomas L. Wrenn.

Aug. 17—(Docket 4505) Prehearing Conference in Eastern Air Lines Miami-San Juan Air Coach Tariff Investigation. 10 a. m., Room C-116, Temp. Bidg. 5, Washington. Examiner Joseph L. Fitzmaurice.

Aug. 17—(Docket 2755) Prehearing Conference in Pan American-Greece. August

ference in Pan American-Grace Airways Mail Rate Case. 10 a. m., Room E-214, Temp. Bldg. 5, Washington.

Aug. 18—(Docket 2019 et al.) Hearing in reopened Additional California-Nevada Service Case. 10 a. m. Carlton Hotel, Washington. Examiner F. Merritt Ruhlen.

Aug. 21-(Docket 4556) Prehearing Conference in New England Air Express Burbank-Teterboro Tariff Investigation. 10 a. m.,

Reterboro Tariff Investigation. 10 a. m., Room C-116. Temp. Bldg. 5, Washington. Examiner R. Vernon Radcliffe.
Sept. 11—(Docket 4207) Hearing in Arrow Mirways-California Arrow Interlocking Relationships Case (Enforcement Proceeding.) Fentative. Examiner Walter W. Bryan.
Sept. 11—(Dockets 3213 and 4187) Hearing in applications for Havana-New York Fordign Air Carrier Permits. Tentative. Ex-

ign Air Carrier Permits. Tentative. Ex-miner J. Earl Cox.

Sept. 18-(Docket 4228 et al.) Hearing in Philadelphia Suspension Case, American Airlines et al. Tentative.

Sept. 18-(Docket 4228 et al.) Hearing in Philadelphia Service Suspension Case (In-ernational Routes). Tentative. Examiner Herbert K. Bryan. Sept. 25—(Dockets 4443 and 4480) Hearing

Pan American World Airways, et al. Tour Hasing Fare Investigation. Tentative. Exniner F. Merritt Ruhlen.



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Reeve Aleutian Airways Pushes Bering Island Tours

By ERIC BRAMLEY

Although a tough 1,783-mile route from Anchorage, Alaska, out to Attu, at the end of the Aleutians, is enough to keep him plenty busy, Bob Reeve, president and operating chief of Reeve Aleutian Airways, has ideas about carrying a substantial number of tourists out to the Pribilof Islands in the Bering Sea, off Alaska.

St. Paul Island, in the Pribilofs, might not strike the average tourist as the ideal place to visit, but Reeve, one of the aviation veterans in Alaska, believes he can make it "the greatest summer tourist spot in the world."

Last year he carried 100 tourists from Anchorage to St. Paul, a distance of 900 miles, on \$160 all-expense package tours. In 1950, he's looking for 1,000 tourists. During his recent trip to the States he talked with a number of New York travel agents with the idea of setting up package tours from the east. Price has not yet been set.

Asked what the Pribilofs have to attract tourists, Reeve explained that St. Paul Island is the center of the Alaskan fur seal industry, and there's nothing like it in the world. It's inhabited by 500 Aleuts and 30 whites, employes of the Department of Interior's Fish and Wildlife Service. The other inhabitants are seals, by the thousands, and Reeve said that as many as 70,000 of them are killed in a year for commercial purposes.

Hotel Planned

Fish and Wildlife Service has been cooperating in furnishing accommodations for visitors, and a hotel is planned for the island. The airline flies to St. Paul once weekly in the summer and about once every 10 days in winter.

Reeve, who has been in Alaskan avia-

Reeve, who has been in Alaskan aviation for 18 years (prior to that he was with Pan American-Grace in South America), started operating in the Aleutians in 1942 and put his line on a scheduled basis in 1946. It's a tough route. "We just take it for granted that the weather is going to be bad and go on about our business," he said. Last year the airline completed 100% of its schedules—50% on time, 25% six hours late, and 25% about 12 hours late. Anchorage, Cold Bay, Shemya and Adak have GCA, and there are range facilities at all places except Dutch Harbor and St. Paul.

Operating one round-trip weekly on a scheduled basis, and one weekly on an irregular basis, Reeve's business is showing a satisfactory growth. Traffic



Alaska Captains—Captains William R. Borland (left) and Anselm M. Tibbs, chief pilot and assistant general manager respectively of Reeve Aleutian Airways, Inc., Anchorage, Alaska, which serves one of the toughest flying areas in the world. Borland is Alaska-born, a Marine Corps veteran with 5,400 hours, and had charge of pilot training and route checking for the Reeve routes which extend into the Aleutians and to the Pribilof islands. Capt. Tibbs, a Texan and veteran of the Aleutian campaign in the war, has 5,300 hours and was made ass't general manager not long ago.

for January-February, 1950, was double the same 1949 months. In 1949, his line carried 2,113 passengers, performed 195,-000 passenger-miles, hauled 213,000 lbs. of mail and 240,000 lbs. of cargo. This year he expects 3,000 passengers.

Passengers on the airline include construction workers, fishermen and persons connected with the fishing business, salesmen and merchants, residents, those interested in the fur seal industry, tourists and hunters. Cargo consists mainly of parts for industries, but Reeve also mentions that he transports a large amount of whiskey, a popular item around construction camps.

Reeve's Fleet

The Reeve fleet consists of a variety of aircraft. Reeve said he couldn't remember them all, but he ticked off three DC-3's, one Grumman Goose, one Beech C-45, one Lockheed Electra, three Fairchild 71's, one Sikorsky S-39 single-engined amphibian, and one Boeing 80-A freighter. The latter, used by U. S. airlines in the old days, is the only one now in existence, he said. He hopes to add a DC-4 this year.

Some of the planes are used in the extensive charter and bush flying operations conducted out of Anchorage head-quarters. All engine overhaul, 1,500-hr. checks and annual inspections are handled by Pacific Airmotive Corp. on a contract basis.

CAB BRIEFS

Route Cases

Additional service to several points in Florida and Georgia was authorized by the CAB in its decision in the Florida Trunkline Case. National, Eastern and Delta were authorized to serve new points, but most of the authorizations will expire February 1, 1952, just before Southern Airways' certificate renewal case comes up. In addition, National's temporary authorization to serve Key West on its route No. 31 was made permanent.

Delth. A. Lines has applied for a certificate amendment to permit more flexible routing of all-cargo planes and has asked for an exemption pending action on the application.

All American Airways has filed with the Board applications for three new routes which would add 650 miles to its present system. Routes would be as follows: Williamsport, Pa., to Cleveland, via Bradford and Erie, Pa., and Jamestown, N. Y.; Cleveland to Cincinnati via Mansfield, Marion, Columbus and Springfield; and from Scranton/Wilkes-Barre to Hagerstown, Md., via Hazelton and Harrisburg, Pa.

United Air Lines has applied to the Board for authorization to serve Minneapolis/St. Paul as a new intermediate on its route No. 1.

CAB's decision in the South Texas Service Case awarded Trans-Texas Airways an additional route segment extending from the terminal point Mission-McAllen-Edinburg to the terminals San Antonio and Victoria, via Alice, Corpus Christi and Beeville. Another TTA application for a route from Laredo to Corpus Christi via Alice was denied, as also was the application of Val-Air Lines, Inc., for service between the lower Rio Grande Valley and San Antonio and Houston.

The Board's order in the Service to Springfield Case officially redesignated Hartford and Springfield as a co-intermediate to be served through Bradley Field at Windsor Locks, Conn., by American Airlines on its routes Nos. 5 and 6, and by United on route Nos. 5 and 6, and by United on route No. 1 American was authorized to serve Springfield through Bradley Field instead of through Barnes Airport at Westfield.

Wiggins Airways has applied for an amendment of its certificate which would have the effect of extending its New England feeder and local air service into New York City, serving the coterminals of LaGuardia Field and Newark Airport. The application also asked that Wiggins' certificate be made permanent, or, in the alternative, be extended for five years.

Mail Rates

New tentative mail rates that would cut the mail compensation of **Pioneer Air Lines** for the last five months of 1949 by \$42,668 and its estimated mail pay for 1950 by \$175,000 have been proposed in a CAB show cause order. The

TRAFFIC & SALES

cut resulted chiefly from improvement in the feeder's passenger load factors and non-mail revenues, and reductions in flight equipment depreciation expense and developmental expense.

A new mail rate based on average daily scheduled mileage flown instead of on average daily scheduled and average daily designated mileage computed on a segment basis has been proposed for Wiggins Airways in a CAB show cause order. New rate is designed to enable Wiggins to achieve greater flexibility in scheduling and to remove inequities in its present rate formula.

New temporary mail rates computed on a sliding scale incentive basis have been proposed by CAB for Trans-Texas Airways. Proposed rates would yield the carrier an estimated \$118,000 additional mail compensation for the 32-month period ended May 31, 1950, and will yield an estimated additional \$1,660,000 per annum for the period beginning June 1.

Fares-Tariffs

On complaint of Continental Air Lines, the Board has ordered an investi-gation of Trans-Texas Airways' roundtrip discounts and of the level of its standard local fares, which are alleged to be substantially lower than the fare level of domestic carriers generally.

The Board has approved agreements between various air carriers that no member of IATA shall on or after September 1 provide free or reduced transportation to tour conductors on terms or conditions that are more liberal than those set forth in prior IATA resolutions, or that would not be permitted by such resolutions, if effective. The latter are under formal investigation in another proceeding.

Northwest Airlines requested CAB approval of a special tariff permission application authorizing it to increase air coach fares approximately 10% on daylight operations and to remove departure time restrictions on its coach flights.

The Board amended Trans-Texas Airways certificate for route No. 82 to authorize service beyond Fort Stockton to El Paso via Pecos, Texas. Applications of Pioneer and Continental to serve Pecos were deferred pending final disposition of the Trans-Texas Certifi-cate Renewal Case.

CAB has granted Transocean Air Lines an exemption permitting it to perform a Navy contract to carry per-sonnel and supplies between Fairbanks and Naval Petroleum Reserve No. 4 in Alaska and to other Alaskan points. Contract runs to July 31, 1951.

CAB made permanent its disapproval of interline ticketing agreements between Trans American Airways, Inc., and six other non-scheduled air carriers on the ground that the proposed agreements would set up procedures which would facilitate violations of the Act and of the Board's Economic Regulations.

An interline agreement between American Overseas Airlines and other carriers for the purpose of facilitating the movement of aliens in transit without U. S. transit visas has been approved by the CAB.

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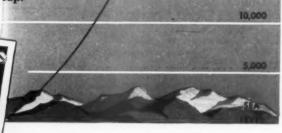
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Raising the Room

HIGH ALTITUDE

Developed by Eclipse-Pioneer in cooperation with the Aero Medical Lab at Wright Field, the new AF Type D-1 Oxygen Regulator combines the functions of a pressure demand oxygen regulator, flow indicator and pressure gauge-all in one compact, lightweight and easily mounted unit. Designed for normal use up to 43,000 feet, this regulator is suitable for emergency use up to 50,000 feet (as in the case of failure of the cabin pressurization equipment). Among its many advantages, the new regulator includes a built-in warning system,

automatic regulation of air-oxygen mix to 100% oxygen at approximately 33,000 feet, automatic pressure breathing which becomes effective at approximately 40,000 feet, and an automatic "Comfo" breathing feature which assures an unretarded oxygen flow at all times, despite resistance of long supply lines. Thus the new AF Type D-1 Oxygen Regulator joins the long list of Eclipse-Pioneer developments already in service helping to keep American air power on top.



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-ADMINISTRATIVE-

Arthur F. Kelly, vice president-sales for Western Air Lines, has been appointed to the national advisory air staff committee for reserve policy.

Andrew M. deVoursney, assistant to Curtis Barkes, vice president-finance of United Air Lines since 1948 and ad-

ditionally assistant treasurer for the past three months, has been named treasurer of the corporation. He succeeds Norman B. Haley who has resigned, effective August 31. Haley was formerly director of the Bureau of Air Mail, Inter-



deVoursney

state Commerce Commission; Research Assistant and Consultant to the Federal Coordinator of Transportation; and the first director of the Bureau of Economic Regulation, Civil Aeronautics Board.

Cecil A. Beasley, Jr., a director of Southern Airways, has been retained by the transportation division of the Economic Cooperation Administration as a consultant in aviation matters.

Allison G. Read has resigned as assistant director of purchasing of American Airlines to accept a position with a firm of engineering consultants. He will be stationed in Instanbul, Turkey.

-OPERATIONS-MAINTENANCE-

William L. Word, a pilot with Transocean Air Lines since it was formed in 1946, has been named manager and director of operations of the company's Arctic Circle exploratory flying for the Navy.

J. C. Wilson, former superintendent of station service for Trans World Airlines in Europe, has been advanced to assistant superintendent of station and in-flight service-overseas, with headquarters at Cairo.

Caron E. Cariberg has been promoted from superintendent of design engineering for Northwest Airlines to manager of the plant and equipment engineering division. He joined NWA in 1943 as a plant engineer at St. Paul.

George A. Rondeau has been named tation manager for Slick Airways at Dakland. He was with Slick in San Francisco for two years and before that was with Chance-Vought Aircraft.

Earle W. Waring has been appointed ommissary representative for Pan American World Airways at Tocumen irport in Panama. He was for several ears assistant to the division airways uperintendent in Miami.

George P. Kraynak, formerly senior perations agent for Capital Airlines at chattanooga, has been made district perations manager at Wheeling.

George L. Bright has been appointed station manager for Robinson Airlines at Oneida County Airport, serving Utica-Rome, N. Y.

Charlie N. (Jimmy) James, former vice president-operations of Western Air Lines, has joined Douglas Aircraft Co. as a test engineer in the Long Beach plant's testing laboratory.

Richard Spinney, formerly stationed in San Francisco, has replaced Russ Emerson as station manager for The Flying Tiger Line at Oakland. Emerson is the new station manager at Philadelphia.

W. L. Hollingsworth, superintendent of stations for Northwest Airlines' Orient Region, has transferred his headquarters from the company's general offices in St. Paul to Tokyo.

Howard F. Jacobson has been promoted from junior station manager for Pan American World Airways at San Juan to station manager at San Salvador. He succeeds Juan Rappaccioli, resigned.

Kenneth B. Haugen, who joined

Northwest Airlines as a pilot in 1936, has been promoted to the position of chief of flight standards for the company. He has flown the line continuously as a captain since 1940 except for a military leave of absence.



Haugen

Robert H. Jerosch, former food and equipment control supervisor for Pan American World Airways at LaGuardia Field, has been named superintendent of commissary, replacing Aldert Tuinman, new superintendent of food service. E. V. Coursen takes Jerosch's former post.

R. W. Chambers and G. E. Harrison have been promoted from station manager to the newly created position of station superintendent at Wold-Chamberlain Field and Seattle-Tacoma International Airport, respectively.

Paul L. Thomas, formerly in charge of plant and equipment engineering division for Northwest Airlines, has been appointed administrative assistant to K. R. Ferguson, vice president-operations and engineering.

Frank J. McLaughlin, formerly assistant to the superintendent of regulations and facilitation for Pan American World Airways in New York, has been appointed superintendent of flight service at LaGuardia Field. He succeeds Richard E. O'Leary, who has been appointed assistant to Kenneth Parratt, service manager.

Willard R. Marquis, chief mechanic for Pan American World Airways at Port-

au-Prince, Haiti, for the past three years, has been promoted to station manager.

_TRAFFIC & SALES__

B. J. Talbot, formerly in charge of sales for Northwest Airlines in the Philippines, has been named European director of the company to succeed K. D. McKenzie, new eastern regional sales manager.

Clifford E. Roberts has resigned as southern district traffic and sales manager for Mid-Continent Airlines. He has not announced any future plans.

Robert J. Wright, formerly Hawaii sales manager for Northwest Airlines, has been transferred to Detroit as Michigan state sales manager.

Henry J. Katzenberger, sales representative of Braniff Airways, has been appointed by the Air Traffic Conference of America to serve as representative for all Chicago area domestic airlines at the Great Lakes Naval Station.

Claude E. League, former!y city passenger sales manager for Trans World Airlines at Chicago, has been named district sales manager for the newly created district sales area for the Pacific Northwest, with headquarters in Seattle.

Ken. C. Sorby has been promoted from manager of Denver reservations for Continental Air Lines to employment manager for the airline.

Frank G. Clain has been transferred from New York to Chicago as district sales manager for The Flying Tiger Line.

Carl Anderson, a veteran of more than 20 years in aviation, has been appointed sales representative for Pan American World Airways in Havana.

Charles S. Blood, who has been supervisor of schedules for Chicago and Southern Air Lines, has been named assistant to the manager of reservations and ticket offices.

Robert F. Gardiner has been assigned to the new post of district passenger service manager for United Air Lines at Philadelphia. B. M. Gaynor, former chief of passenger station service in Denver, succeeds Gardiner as assistant district passenger service manager at Seattle.

Frank E. Loomis, formerly city traffic manager for Eastern Air Lines in Charleston, has been appointed as manager of interline relations and special service for Southern Airways.

Hugh Tighe, former counter sales agent for Continental Air Lines at Denver, has been named city traffic manger in Pueblo, replacing Dave Savage, resigned. James K. Wade, former em-



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Over the portals of the U. S. Post Office building in New York is this inscription: "Neither snow nor rain nor heat nor gloom of night stays these couriers from the swift completion of their appointed rounds". We can paraphrase that and say that neither fog nor smog nor overcast nor gloom of night now stays Sikorsky helicopters from the swift completion of their appointed rounds on the pioneering mail route operated by Los Angeles Airways.

The C.A.A. has certificated Los Angeles Airways, using Sikorsky helicopters, for flying under instrument conditions.

For more than a year preceding the C.A.A. action, scores of test flights on instruments and many successful landings in zero-zero weather were made. Of equal importance is the unparalleled record of two and one-half years of safe, dependable operation of these Sikorsky helicopters by Los Angeles Airways.

Instrument flight operation is another significant milestone in the progress of this versatile aircraft, which less than a dozen years ago could barely leave the ground under full power.

The C.A.A. certificate extends only to Sikorsky S-51 helicopters used on the Los Angeles air mail route, but it is safe to predict that, because the way has been paved, helicopter instrument flight certificates will be extended to other areas.

SIKORSKY AIRCRAFT

Bridgeport, Connecticut

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fer wh ployment manager, has been transferred to the sales department in Denver.

Robert Minogue, former district traffic manager in Washington for Northwest Airlines, has been named liaison officer of the military bureau of the Air Traffic Conference with the Department of Defense. Stephen Noble, who formerly handled the liaison post on leave from American Airlines, has returned to his company.

John J. Curran, a traffic and sales employe of United Air Lines for the past 13 years, and stationed in Philadelphia since 1939, has severed his connection with the company to assume new duties in sales engineering work in industrial aviation in the eastern seaboard area and to devote more attention to his connection with the U. S. Naval Reserve-Organized, in which he is a commander.

Edward J. Doherty, former assistant director of public relations for American Airlines in the eastern region, has joined Hill & Knowlton, Inc., to serve as director of publicity for National Airlines. Richard E. Fisher takes over Doherty's former post.

L. Peter Cornwall, for the past several months superintendent of cargo traffic for Pan American World Airways at LaGuardia Field, has been promoted to superintendent of cargo sales.

Robert L. Connor, former counter sales agent for Continental Air Lines in Albuquerque, has been transferred to El Paso as traffic representative, replacing Bill Steinhagen, resigned.

Robert J. Rudoloh, an agency and interline representative for KLM Royal Dutch Airlines in New York for the past two years, has been named sales representative for the Philadelphia area.

Edward J. Murphy has been named cargo sales representative for KLM Royal Dutch Airlines in New York. He was city sales manager for The Flying Tiger Line.

William L. Carr, former sales representative for Mid-Continent Airlines at Omaha, has been promoted to city sales manager at Rochester, Minn., succeeding Walter F. Burkhead, recently named to the newly created post of district sales representative at Bismark. The Omaha post was assigned to James L. Hardy, former reservations and ticket agent at St. Louis.

M. D. (Tim) Morrissey, who has served as station manager for British Overseas Airways Corporation in New York, Baltimore and Bermuda, has been named as European sales superintendent for the corporation, with headquarters in London.

Hugh W. Burgoyne, formerly cargo sales representative with Trans-Canada Air Lines in Vancouver, has been transferred to the Chicago district office, where he is in charge of cargo sales.

Airline Commentary

By Eric Bramley



W HO ORIGINATED the airline family plan? That's often been the \$64 question. We now have what we believe is the inside on its origin: One evening after office hours R. E. S. Deichler, vice president-sales of American Airlines, and Walt Sternberg, then assistant v. p.-sales of AA and now vice president-sales of National, stopped in a bar for a drink. They got to talking about the problem of filling seats on weekends, and out of the discussion came an idea for weekend excursion rates for the whole family. In other words, papa, who flies on business, could take his family somewhere on weekends at low fares. Next step was for Deichler and Sternberg to toss the idea into the AA economists under Wayne McMillen. The economists reported back that the idea was sour, that airplanes were filed up well until Saturday noons, so the weekend excursion was out. Then they asked the economists to report on what were the really low periods of the week. After going back through the years, the statisticians came up with the fact that Mondays, Tuesdays and Wednesdays were the low days through all seasons of all years. Out of this study came the family plan, but by the time it was kicked around by the entire company and top executives, everybody had forgotten how it all started.

Something we've often wondered about and something we've been asked about a few times by people in the airline business: Why does Seaboard Air Line Railroad Co. keep the words "Air Line" in its name? Why not just Seaboard Railroad Co.? Certainly seems misleading. Someone even told us that once upon a time when airline stocks were in demand, Seaboard's stock enjoyed a mild rise because people were buying it in the belief that they were investing in an airline. Anyway, we've written to Seaboard and when we get an answer we'll pass it along.

This story comes not from TWA but from A. F. Phelps, the Post Office Department's assistant general superintendent-air in Philadelphia. TWA's Philly office received an urgent message: "Passenger must be milked in Philadelphia." Turned out to be a 1,600-lb. cow bound from New York to Phoenix on a cargo plane and her health required milking en route. George Fox, TWA passenger agent, and described as "an old hand at such things," obliged. The PO also tells us that American Airlines recently refused to carry some mail out of New York. A cargo handler went out to load a certain mail sack, but came back with it a few minutes later and said he didn't want any part of "mail that talks." The sack was opened and found to contain a portable radio which had somehow gotten turned on and turned to a local station. "Reception was good, too," says M. A. Pence, assistant general superintendent-air, New York.

A note from Pierre Desautels, TWA's district sales manager in San Francisco, who read recent items in this column about large excess baggage shipments. He says: "Princess Faika, of Egypt, and her husband left San Francisco on TWA's Flight 12 . . . for Egypt to get the blessing of their marriage from King Farouk. The party left here with 891 lbs. of excess baggage, for total charges of \$2,545.46." Not a bad piece of revenue.

The Civil Aeronautics Administration's public information section sure does get the inquiries from the American public. Not so long ago, CAA put out a release about stall warners on airplanes. Back came a letter from a lady on a farm up in New York state, wanting all the information that CAA had on "stall warmers." Then, too, CAA had been talking about a program to "air condition" American youth. This prompted a registered nurse to write and ask for all available information on "air conditioning American youth and also hospitals." Charlie Planck, that old wag who works in the public information section, claims, however, that the clincher was the man who wrote in and said, "Please send me all you know about aeronautics." Charlie swears he sent him a blank postcard.

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*Lear, Inc.

*Line Material Company

Link Paper Company

Lockheed Aircraft Corporation

The Glenn L. Martin Company

Mid-Continent Airlines

*Minneapolis-Honeywell Regulator Co.

*The Moulton Company, Inc.

National Airlines

Northwest Airlines, Inc.

Pacific Airmotive Corporation

*Pan American-Grace Airways, Inc.

*Pan American World Airways System

Phillips Petroleum Company

Pratt & Whitney Aircraft

Remington Rand, Inc.

Republic Aviation Corporation

Revere Electric Mfg. Company

*A. V. Roe Canada, Ltd.

SAAB Aircraft Company

Scandinavian Airlines System

*Scott Aviation Company

*Shell Oil Company

Sikorsky Aircraft

Sinclair Refining Company

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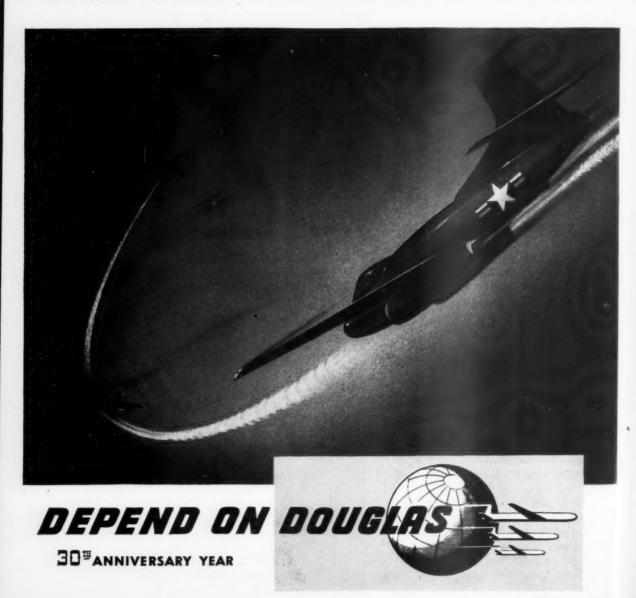
F3D skyknight, powered by two jets, is designed to reach high altitudes at extreme speeds for night interception of unfriendly bombers by radar in all kinds of weather.

Designed by Douglas for the U. S. Navy, the *Skyknight* is suited for various tasks aboard a carrier with little compromise of its basic role as an all-weather fighter.

High design efficiency permits the twin-jet F3D to fly at advanced speeds and over exceptionally long distances. This makes it adaptable as an attack fighter, long-range patrol or reconnaissance plane, or as a long-range fighter escort.

The Skyknight is another in the long line of dependable Douglas aircraft which have made the name "Douglas" world-famous for three decades.

EL SEGUNDO PLANT OF DOUGLAS AIRCRAFT COMPANY, INC.



U. S. Domestic Airline Revenues & Expenses for May, 1950

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American Braniff Capital Caribbean G & S	10,141,252 1,370,912 2,546,019 66,505 808,312	\$ 8,739,199 1,083,437 1,974,036 42,002 618,270	\$ 484.656 201.322 281.449 17.420 148,127	\$ 183,877 27,604 67,353 14,563	\$ 580,384 35,631 140,404 2,448 16,354	105,632 10,179 14,265 359 7,183	8 7,122 8,115 41,754 393	\$ 7,935,698 1,161,881 2,285,832 72,380 703,898	\$3,983,922 536,672 1,031,660 30,813 294,628	\$3,951,776 625,209 1,254,172 41,567 409,270	\$ 2,205,553 209,031 260,167 -5,675 104,414
Colonial Continental Delta Eastern Eawaiias	343,446 714,946 1,518,220 6,213,697 274,751	223.739 324.523 1,245.171 5,472.399 222.313	104,361 349,025* 170,051 284,391 3,127	3,143 4,261 24,893 121,967 11,533	3,551 13,240 42,331 239,886 20,936	1.570 3.164 14.961 76.8 <i>5</i> 8 5.538	780 5,113 912 8,364 10,407	383,276 485,514 1,345,737 5,902,243 288,550	182,260 228,027 630,733 3,124,043 110,827	201,016 257,487 715,004 2,778,200 177,723	-39,830 229,432 172,483 311,454 -13,799
Inland** MCA Wational Hortheast Northwest	249,307 656,591 1,114,887 492,910 2,952,854	180,667 496,293 896,660 306,433 2,493,840	59,014 131,873 145,369 134,554 252,728	2,218 7,987 24,237 5,271 54,798	4,777 11,262 18,805 9,551 113,204	2,136 4,675 14,864 1,455 17,308	82 833 11.943 5,231 2,813	226,604 595,444 1,126,824 522,252 3,315,140	109,491 228,075 553,357 247,265 1,720,137	117,113 367,369 573,467 274,987 1,595,003	22,703 61,147 -11,936 -29,342 -362,286
Trans Pacific TWA United Western**	51,036 6,235,790 8,380,380 960,577	45,576 5,251,883 6,997,878 632,128	495.159 584,669 162,916	119 159,199 207,038 17,148	959 225, 518 409,263 16,271	520 59,242 70,542 4,691	3,168 27,612 20,582 117,183	73,318 5,196,284 7,181,505 877,777	31,830 2,701,071 3,204,823 422,811	41,488 2,495,213 3,976,682 454,966	-22,282 1,039,506 1,198,875 82,860
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U. S. International Airline Traffic for May, 1950

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C & S Colonial Eastern	1.658 1.568 1.199	2,087,000 1,314,000 1,247,000	7,133,000 2,458,000 2,995,000	29.26 53.46 41.64	2,367 418 7,809	305 663		45,244 14,587 29,682	262,395 154,204 169,069	855,504 346,613 360,399	30.67 44.49 46.91	175,253 55,458 60,419	183,975 55,189 64,480	100.00
National Northwest Panagra PAA	5.077 5.024 8.033	1,434,000 8,976,000 8,502,000	3,354,000 17,439,000 18,613,000	42.75 51.47 45.60	991 189,273 30,996	24.917 18,918		505,536	163,196 1,698,956 1,153,100	371,003 2,818,341 2,517,322	43.99 60.28 45.81	51,816 580,137 491,282	58,396 485,245 492,869	200.00
Latin Amer Atlantic Pacific Alaska	. 48,635 13,159 6,176 3,727	42,603,000 28,006,000 19,415,000 3,506,000	80,941,000 38,866,000 35,909,000 6,873,000	52.63 72.06 54.07 51.01	245,370 268,184 623,699 33,560	63,104 75,801 62,397	1,638,995 705,244 439,505 387,262	195,304 27,749 3,106	4,137,567	12,720,234 6,215,027 5,606,877 1,540,300	50.97 66.57 56.24 51.22	2,310,687 1,017,110 859,793 230,958	2,134,439 1,014,551 806,806 213,164	97.12 99.90
TWA United	10,223	26,575,000 4,908,000	47.147.000 8,378,000	56.37 58.58	237.793 50,389	106,322		467,991 25.731	3,735,682	6,202,579 1,108,441	60.23	1,131,793	1,123,311 158,420	
TOTALS	125,829 • Includ	America; C &	tabulations vo bard. Figures to South And Honolulu. Op	for Am	prican Airli	rican Avia nes includ ormula; Da	tion Publicatorn to	rier's se uerto Ric	rom monthly r rwice to Maxi o; National t	on but not to Havana; Ho	n Canad	to Orient a	of to South	98,48

U. S. Feeder Airline Traffic for May, 1950

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l American mansa matral mallenger	13,872 1,682 941 1,685	1,980,000 387,000 110,000 496,000	5,815,000 1,563,000 477,000 2,042,000	34.06 24.76 23.06 24.29	4,456 503 1,356 2,554	12,442 192 1,968	719	210,742 34,420 11,989 59,733	665,059 161,205 45,877 218,496	31.69 21.35 26.13 27.34	277,108 78,037 158,960 102,101	287,061 79,236 163,308 103,664	95.77 97.84 96.89 98.49
mpire id-West onerch iedmont	3,421 600 3,000 10,597	713,000 88,000 744,000 2,171,000	2,011,000 527,000 2,887,000 6,794,000	35.45 16.68 25.77 31.95	1,573 1,391 2,341 4,780	1,904 2,673 6,863	10,134 10,985	69,719 8,481 89,990 230,357	198,389 57,967 321,499 776,411	35.14 14.63 27.99 29.67	95,748 131,742 160,430 324,813	93,496 151,280 161,820 326,132	99.67 87.12 99.02 99.11
Pioneer lobinson Southern Southwest	11,024 5,052 3,091 10,669	2,961,000 790,000 517,000 1,959,000	7,600,000 1,919,000 3,120,000 4,354,000	38.96 41.17 16.57 44.99	7.758 1.936 3.854 4.224	4,289 3,501 4,414 4,603	12.564 2.367 14.608	322,275 75,096 57,652 219,869	759,911 213,965 281,543 435,602	42.41 35.10 20.48 50.47	316,213 96,578 148,415 207,331	318,368 93,940 149,110 205,232	99.22 96.44 99.53 99.45
rane-Texas urmer est Coast iggins is. Central	5,441 1,428 6,983 225 4,258	1,197,000 359,000 995,000 19,000 679,000	5,325,000 1,024,000 2,665,000 111,000 1,489,000	22,48 35.06 37.34 17.11 45.60	4,575 565 605 149 3,386	2,038 2,543 1,824 4,188	5,002	131.693 35.667 90.846 1.838 71.282	532,539 108,937 277,349 11,054 154,763	24.73 32.74 32.76 16.62 46.06	253,590 90,333 126,920 27,840 177,139	254,386 79,856 127,286 37,820 183,054	99.69 98.91 99.27 73.14 96.68
OTALS	83,969	16,165,000	48,723,000	33-17	46,006	53,442	61,716	1,721,649	5,220,566	32.96	2,773,298	2,815,049	98.50
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comfort and convenience on the ground... better and safer flying...that's the aim of Mr. Marlin's efficient management at Patrick Henry Airport.

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largest and most modern aviation petroleum laboratories... Esso Aviation Products are famous for dependable performance!



AIRPORTS

Including Features Formerly in AIRPORTS AND AIR CARRIERS Magazine

Airports to Feel Effects of Mobilization

By KEITH SAUNDERS

A IRPORT OPERATORS throughout the country watched and awaited developments, in some cases with cautious concern, in others with outright alarm, as the Korean situation impelled the government to take the first steps toward placing the country on a wartime footing.

The impending mobilization, whether it turned out to be partial or full, would affect just about every civil airport because:

1. Small municipal airports and small privately controlled commercial fields would see their income virtually wiped out in the event personal flying were to be as severely restricted as it was during the last war.

2. Airports served by the scheduled airlines would see their revenues reduced and their revenue structures jeopardized should the military find it necessary to requisition any considerable portion of the fleets of the domestic airlines.

3. Surplus military airports acquired in the past few years by cities and counties might suddenly have to be taken over wholly or in part by Air Force or Navy air units.

The Airport Operators Council,

representing some 30 of the larger and busier terminal-type airports, was quick to sense the danger to its members and got off a letter to the Air Coordinating Committee as follows:

"AOC members have assumed heavy sponsors' obligations in return for some Federal aid as participants in the National Airport Plan. These obligations include annual debt service payments as well as the maintenance and operating costs of providing a 'going concern' air terminal.

Advance Notice Asked

"As airport sponsors, essential to the Civil Aeronautics Administrator in achieving the objectives set forth in the Federal Airport Act, the airport operators have based financial arrangements upon a rather closely figured anticipated revenue from airport use fees, rentals, charges and related concession revenues. Even a small percentage of unexpected change in airport traffic volume can seriously upset airport economy, and could result in airport curtailments that would tend to make civil air transportation resources less ready to meet emergency requirements."

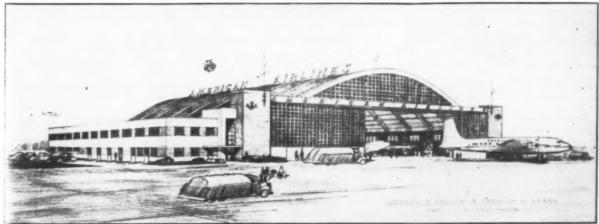
Commenting on the announcement that 10% of the four-engined equipment of the nation's civil airlines was under charter to the military, the letter went on to state:

"Airport operators must know when and where such action by the Department of Defense may bring airline schedule curtailment, with its attendant reduction of the revenues that keep airports operating.

"It is the flow of traffic in volume through air terminals that provides the revenue to keep operating the airport facilities of our civil airways. (At some airports less than 15% of the total revenue comes from airline landing fees.) If revenue is to fail for any emergency reason, airport management must be warned and be prepared with some financial plan.

"We fully realize the importance of security provisions related to emergency planning and ask only that airport operators concerned be on the same footing as aircraft operators concerned, with respect to advance information covering any plans that may change the flow of civil air traffic."

Even more worried were the operators of surplus military airports. More than 500 such fields were de-



A Hangar—combination hangar and office building which American Airlines will occupy at Greater Fort Worth International Airport upon completion in the autumn of 1951. The office area

will accommodate AA's southern regional operations and sales offices, now quartered at Dallas and at Meacham Field, Fort Worth. Structure was designed by Joseph R. Pelich and Presten M. Geren, associated architects and engineers of Fort Worth.

clared surplus at the end of World War II. Some for which no takers were found were kept open by the military on a "caretaker" basis, and a few were completely abandoned, but the great majority were turned over to cities and counties with the stipulation that they were to be maintained and operated as public airports and that they would be subject to being taken back for exclusive or non-exclusive military use and occupancy "during any national emergency declared by the President of the United States of America or the Congress thereof..."

Barring another full-scale war, this "recapture" clause might have no effect whatever on most of the surplus airfields, but with both the Air Force and the Navy air arm given the go-ahead on a mushroom-like expansion it was apparent that existing military air bases in the continental U. S. would not meet all the need and some surplus airports now operating as civil facilities would have to make room for some military aviation.

This could be an extremely serious matter at airports where numerous temporary wartime buildings that came with the field are now leased to various aviation and non-aviation enterprises, constituting the major source of income at the airport.

No Plan on Paper

And the unfortunate part of it was that the operators of such field would have little or no advance notice as to the military's intentions, for the Defense Department apparently had no plan on paper for reconverting World War II airfields from civil to military usage. And it had adopted a policy that no information would be given out with regard to the possible reactivation of airports and other military installations "during the planning stage."

The Department of the Air Force has sent out a survey team to inspect certain surplus airports with a view to their potentialities for military use and occupancy, but there was no way of knowing how many fields might be visited and how many of those inspected by the survey team might eventually be required.

Meanwhile, Charles J. Lowen of Denver, chairman of the AOC's National Security Resources Liaison Committee, was urging that surplus military fields acquired by airport sponsors and now fully utilized in any community's civil economy should not be disturbed during a partial mobilization.

He said AOC feels strongly that many military air establishments around the country that are not now fully utilized should be given first consideration in providing for military emergency requirements before

AIRPORT NEWS DIGEST

- The Senate has passed the bill (S. 1281) permitting federal participation up to 50% in the cost of land acquisition for federal-aid airport projects, except in public land states and Alaska and the Virgin Islands, where the participation will be higher.
- The engineering firm of Leigh Fisher & Associates, of South Bend, has been given a contract to draft recommendations for the \$700,000 administration building to be erected at San Antonio Municipal Airport.
- Port of New York Authority plans to acquire an additional 450 acres of land to permit expansion of the two runways at Teterboro Airport from 4,200 to 5,000 feet and to relocate them.
- CAA officials have approved plans for construction of a 6,500-foot instrument runway costing an estimated \$558,000 at Adams Field, the Little Rock municipal airport.
- The multi-million-dollar Oneida County Airport, serving Utica-Rome, N. Y., is now open.
- The new control tower at Tulsa Municipal Airport will be ready for operation by early September. Late delivery of electrical equipment delayed the project.
- Most recent addition to the chain of Dobbs House airport restaurants is now open in the administration building at Port Columbus, Ohio. Restaurant, which cost \$129,000 and seats 90, adjoins the enlarged, modern lobby and overlooks the landing field. It handles catering service for 14 TWA flights daily. C. E. White is manager.
- Southern Builders, Inc., of Shreveport, submitted a low bid of \$686,500 for construction of a terminal and administration building for Shreveport's new Class 5 airport now being built. Construction is expected to start in the fall.
- The new administration building at Burlington (Iowa) Municipal Airport is to be dedicated September 3. Ceremonies also will commemorate Manager A. J. Hartman's 47th year in aviation.
- Architect Everett Johns has been engaged to draw plans for an administration building and terminal at Rosecrans Field, St. Joseph, Mo., to cost approximately \$150,000. Minimum bid received on a previous proposal was \$228,000, and all bids were rejected.
- CAA has approved a high intensity lighting system for the north-south instrument runway at New Castle County (Del.) Airport.
- The N-S runway at Peoria Municipal Airport, closed to traffic in mid-June when a 350-foot section of the paving settled, has been reopened.
- The NW-SE runway at Muskegon County (Mich.) Airport is to be extended from the present 3,300 feet to 5,000 feet and widened from 100 to 150 feet. Cost will be about \$150,000. Work starts this month.
- Airlines serving Boston will begin moving into the new multimillion-dollar apron building at Logan International Airport in about 30 days.
- An illustrated booklet, telling the story of how the mountain-top airport at Charleston, W. Va., (Kanawha County) was built, is now on sale at 60c a copy. Write to Airport Booklet, P. O. Box 44, Charleston 21, W. Va.
- New Orleans Aviation Board has approved a \$274,000 waterworks project and increased parking facilities at Moisant International Airport.
- Ground has been broken for \$100,000 administration building at the Palmdale (Calif.) Airport, which is owned by Los Angeles County.
- The Block Island State Airport, third in the system of airports owned and operated by the State of Rhode Island, has been opened to flyers. The field has a 2,000-foot paved runway, a lighting system and an administration building.
- The Bi-County Joint Board of Management of the Scranton-Wilkes-Barre Airport has ordered airport architects to prepare three or four alternate sketches of the proposed new terminal building at the field before autumn for the purpose of studying construction costs and functional design.

AIRPORTS

disturbing the economy of cities where the surplus installations have undergone costly conversion and are usefully and gainfully employed.

CAA's Policy

Strong support for this view came from Civil Aeronautics Administrator D. W. Rentzel, who informed all CAA regional administrators that:

"It will be our policy to prevail upon the military establishments to use facilities which are owned by the United States or facilities where there are no civil activities. It will also be our policy where the military requirements extend to airports which have civil activities to cooperate with the military establishments in securing joint use of the facilities. In this connection, it will be the policy of the CAA that such joint use will not unduly restrict civil activities."

How soon will the military be moving into needed surplus airports? No one seemed to know, but it was a safe bet that the first such moves would be made before the end of the year. It was pointed out that Congress or the President would not need to proclaim a full national emergency in order to invoke the airport "recapture" clauses. The President at any time, on request of the Department of Defense, could state that there exists a national emergency that necessitated the taking over of certain surplus airports by the military.

AIRPORT PEOPLE

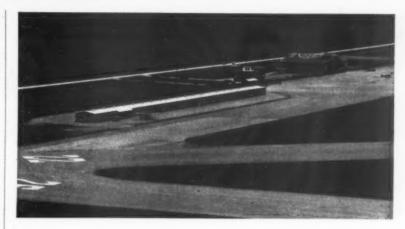
B. M. (Mike) Doolin, former manager of the San Francisco Municipal Airport, has become associated with R. P. Etienne Properties, Inc., in connection with a \$1,000,000 hotel planned in Burlingame, Calif., about two miles from the SF airport.

Fred Byrom, formerly fire chief at Kelly Air Force Base, has been appointed to the newly created post of fire and safety director at San Antonio Municipal Airport and at Stinson Field.

James E. (Red) Bagby, former paratrooper and more recently a city detective, is manager of the new Vicksburg Miss.) Municipal Airport.

Ralph Nolan has resigned as manager of the municipal airport at Joplin, Mo. Adm. John W. Reeves, Jr., has assumed his duties as general manager of the Los Angeles Department of Airports. His offices are at Los Angeles international Airport.

S. C. (Cotton) McDonald, resident naintenance supervisor at Florence Municipal Airport for the past four years, has been named chief supervisor of airports for the South Carolina Aeronautics Commission. Grover C. Collins, former resident maintenance supervisor at Darlington Municipal, takes over the Florence position.



Here is a successful airport with HIGHER operating costs



INDIVIDUAL T-HANGARS. Ideal for limited area. Durable construction, economical. Exclusive Bi-fold canopy doors for easy operation, less maintenance... form protective canopy when open.



MUL-T HANGARS. Sturdy, profitable housing, quickly erected at low cost. Bi-fold canopy doors operate with finger-tip pressure, unaffected by winds or weather.



ALL-STEEL COMMERCIAL HANGARS. Every size and type . . . standardized or special design . . . to fit your airport.



STEEL-MASONRY HANGARS. Clear floor space, ample ceiling height, easy access, light, and ventilation.

This is Truax Field at Madison, Wisconsin. International Steel installed a 20-ship Mul-T Hangar Building here recently and the operating costs of the field increased with the added expenses—small expenses, admittedly, but there was still an increase.

However, Truax Field is a successful airport because the management takes advantage of opportunities to boost the revenue whenever possible. While the expense of the International hangar increased the operating costs, the revenue from the rental is not only offsetting this cost but is actually helping to pay for much of the other expenses.

International Steel buildings—from single T-Hangars to large shop hangars—can be built at your airport to your specifications—to fit your exact requirements—quickly and economically. Plan today to cut your operating costs by increasing your revenue.

Write today ...

for complete information how you can increase the income of your airport by hangar rental. We will be glad to submit suggestions . . , at no obligation to you.



1800 EDGAR ST. EVANSVILLE 7, IND.

Survey Reflects Decline in Active Airports

A LTHOUGH CAA records show 6,500 airports in the U. S. as of July 1, there probably are less than 4,000 in full or part-time operation, even during the summer when flying activities are at their seasonal peak.

That's a major conclusion reached after a detailed survey of small airport operations by AMERICAN AVIATION staff representatives over the past few months. The survey into the economic health of airport and fixed-base operators included an intensive coverage of an average state (North Carolina), plus spot checks along a route from Washington through the southwest to the west coast and from Washington into the New York area.

North Carolina was selected as the subject for intensive study because it is considered a typically favorable area for small airport operations, with good flying weather and average economic conditions to make that state representative of the country as a whole.

This is a report on the finding

within that state, results which were supported by the above-mentioned spot checks in other areas.

Total Unknown

Based on the results, it may be safely said that no one knows even approximately how many airports are open—part or full time—for service to lightplane operators.

During the months of June and July, AA Representative Page Shamburger personally visited the sites of all but four of the 129 commercial airports listed in the CAA's Airman's Guide. Only 56 airports were found on which there was a local operator offering aviation services on a daily, year-round basis. Another eight were operated only on week-ends, two only during summer months, five only for aerial crop dusters.

Some 43, or nearly 35%, of the 125 airports visited were closed entirely to lightplane operations.

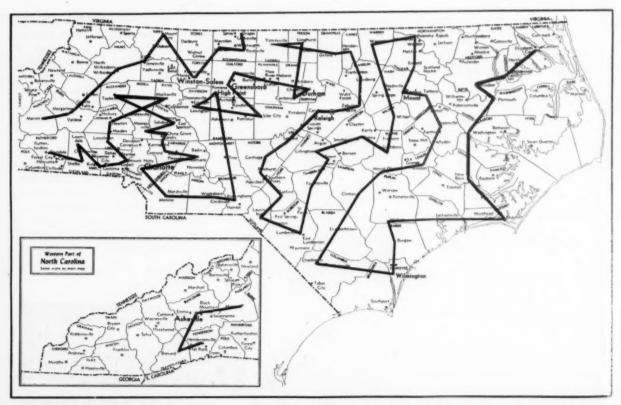
Another 11 airports were available for landings and take-offs but did not have any operator to offer plane services.

Thus, of the 125 airports checked, only 71 or 57% were in operation, full or part-time.

Applying this percentage to a national basis would mean that only about 3,700 of the 6,500 listed by CAA were in actual service this past summer.

Local Flying Declines

Some of the 43 closed airports had been abandoned in the past few months, but the greater number had closed last fall. Local crop failures were blamed in some instances, but in most cases the closings came as a result of a steady decline in local flying activity coupled with tightened restrictions on GI flight training, which reduced applications to a trickle. At least one operator on over 50% of the airports in the state had qualified to give such training to veterans, but some already have gone out of business and the survivors



Survey Route—merical airports in North Carolina.

were barely hanging on, with only two to six students enrolled.

On the 49 airports still found to be open for business seven days a week, few operators were found to be making money, and many were just meeting expenses. Some operators were making their living from n o n-aviation sources, such as insurance,

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and were merely keeping the airports open because they like aviation and are hopeful private flying business might eventually become profitable.

Most of the operators are short on business and long on equipment. They bought six to 15 trainers when the GI program was booming and now have enough business to justify operation of only two or three.

Repairs and Dusting

The financial mainstay of a number of the surviving operators in the state is repair work, followed closely by crop dusting. Numbers of A&E mechanics, finding CAA regulations irksome and business a little dull, have deserted the hangars and gotten jobs in automobile repair shops.

Most of the operators interviewed seemed prepared to carry on for a while unless a worsening military situation should result in severe restrictions on personal flying. Most of the financially weak operators seemed to have been eliminated by mid-1950.

The North Carolina findings illustrate graphically the difficulty of maintaining up-to-date records on the nation's airport facilities in an era of rapid change for the aviation industry.

For comparison of North Carolina findings with listings in the CAA Airman's Guide American Aviation Directory and another national airport directory, see accompanying tabula-

Most Excess Intermediate Fields to Remain in Use

Less than 10% of the Civil Aeronautics Administration's intermediate landing fields will have to be closed as a result of the recent revision of the standards for such fields.

The original estimate was that the

North Carolina Airport Boxscore

Comparison of Number of Airports Listed in Aviation Directories with Actual Number in Operation in June-July, 1950

Commercial Airports Listed		No. in full or part-time operation*	% of listings found in operation
CAA Airman's Guide*	125	71	57%
A National Airport Directory**	125	71	57%
American Aviation Directory***	81	71	87%

^{*} Issue of May 23, 1950, lists 129 airports of which 125 were checked.

revised standards might result in the closing of 75 or more of the 214 intermediate fields scattered along the nation's airways for emergency use.

As it has turned out, 98 of the fields earmarked as dispensable under the new standards either have been or are in process of being turned over to local governing agencies who will continue to operate them as landing fields. Another 100 will be kept in operation by the CAA, and only 16 will be discontinued, according to CAA's latest estimates.

Dual result of this move is to provide many communities with a lighted landing strip that they might not otherwise have and, at the same time, to relieve CAA and the taxpayers of the expense of operating and maintaining approximately 114 intermediate fields deemed no longer necessary to meet the safety requirements of present-day aircraft.

This saving probably will exceed \$300,000 annually, since the cost of the entire 214 fields for last fiscal year was \$666,130.

Lights Transferred

In addition to the landing strips that have been turned over to local agencies, the lighting equipment on a number of the intermediate fields has been transferred to some existing airport heretofore lacking such facilities. For example, lights were removed from the discontinued intermediate at Harpersville, Texas, to the munici-pal airport at nearby Stephensville, and from the intermediate at Hammond, Tex., to the Bryan Municipal Airport.

Under the revised policy, CAA is to provide intermediate landing fields along established civil airways to the extent necessary to achieve a spacing of 200 miles between suitably lighted airports in flat terrain and 100 miles in rough or mountainous terrain. with some exceptions based on safety requirements or unusual circumstances

Priority was given to the retention of intermediate landing fields associated with CAA navigational and communication facilities, with secondary consideration being given to retention of fields useful as a base of operations for such activities as forest fire fighting and search and rescue.

The 100 fields to be continued in operation by CAA may be enlarged, modified and improved to the extent necessary to accommodate, under all weather and soil conditions, the aircraft normally flying the airways on which they are located.

In a companion move, CAA has discontinued the operation of all airways beacon lights except those which mark airports and hazards or define a point on an airway in mountainous

The 800 to 1,000 beacons being discontinued under this program are being turned over to state aeronautical organizations and local communities and reportedly are in great demand.

CAA is suggesting that airports acquiring such beacons equip them with an inexpensive green filter, thereby creating a new class of marker bea-

CAA AIRPORT GRANTS

For the two weeks ended June 23, the Civil Aeronautics Administration made Federal-aid airport grant offers totaling \$2,302,539 to 29 communities. as follows, with airport classes in parentheses:

Arizona: Duncan Municipal (2), \$2,930; Safford Mun. (3), \$8,516; Winslow Mun. (5),

California: Kern County Airport, Bakers field (5), \$34,500; Del Norte Co. Airport (4), \$9,109; San Luis-Obispo Co. Airport (4), \$14.446; Redding Mun. (5), \$5,458; Sacra-mento Mun. (5), \$100,043; Santa Barbara

mento Mun. (5), \$100.043; Santa Barbara Mun. (4), \$50.888.

Kansas: Atchison Mun. (2), \$72,000; Phillip Billard Municipal, Topeka (4), \$12,800.

Massachusetts: Vineyard Haven, Martha's Vineyard (3), \$27.252.

Nebraska: Bruning Airport (5), \$17,700; Fairmont State Airport (6), \$17,700; Harvard State Airport (6), \$17,700; Worth Phillipse (6), \$17,700; Worth Phillips

State Airport (6), \$17,700; North Platte Mun. (4), \$72,683.

North Dakota: Bison Mun. (1), \$4,852. North Dakota: Bison Mun. (1), \$4,852.
Oklahoma: Altus Mun. (5), \$7,706; Caney Creek Airport, Kingston (1), \$9,864; Hatbox Field, Muskogee (3), \$3,757; Will Rogers Field, Oklahoma City (4), \$242,725; Tulsa Mun. No. 1 (6), \$29,539.
Pennsylvania: Allentown-Bethlehem (3), \$17,000; Greater Pittsburgh Airport (5), \$300,000; Pottstown Mun. (1), \$40,000.
Texas: Greater Fort Worth International (5), \$1,150,000; Lulling Memorial Airport (1), \$11,703; Panhandle Airport (1), \$5,593.

\$11,703; Panhandle Airport (1), \$5,593.
West Virginia: Wheeling-Ohio Co, Airport

These boosted to 1,367 the number of grant offers made under the Federal Airport Program and increased to \$118,079,199 the amount of Federal funds involved.

^{***} Spring-Summer. 1950, issue † As of July, 1950, 56 were in full-time, year-round operation; 8 in week-end operation only; 2 summer only; 5 crop dusting only.

Dusting-Spraying Hazards Demand Tighter Regulations

By BARBARA WARD

"S IX PILOTS dead and one missing" sounds more like combat than crop dusting. Yet, that is the score of the budworm spraying project just completed in the northwest.

Near the end of July, a million acres of forest in the Washington-Oregon area were scheduled for spraying with a Diesel oil-DDT mixture. Twelve days were allotted. If successful, the Giant Douglas and White Fir spruces would be saved. If the project failed, the experience in Alberta where budworms had killed some 2,000,000,000 acres of forest might be repeated.

One contractor lost three pilots. A second company took up the contract, lost a pilot and sublet the job. Then the third company lost a fifth flier. Another pilot was killed and one is still unlocated in another part of the same project.

Contrast the record with that of the spraying of 400,000 acres of New England woodland with kerosene-DDT, to kill the gypsy moth. East Coast Aviation Corp. of Boston (Bedford) Airport, Mass., employed 200 men and three types of aircraft on the project. Two helicopters, capable of spraying

520 acres per operating hour, were used to spot-spray areas around bodies of water to avoid killing fish.

C-46 Used

Six Stearman aircraft with swaths of 60 feet, capable of spraying 310 acres per operating hour, were used for pastures and rural areas. And one C-46 carrying 1,900 gallons of spray, emptied in eight minutes at the rates of 245 acres per minute, covered the wide forest areas.

The result was the elminination of the Gypsy Moth menace for this year, and probably for five years to come. As sidelines, mosquitoes and insect pests in the cranberry bogs were reduced to a minimum. And no pilots were killed.

Comparison of the two projects may be unfair, as different types of terrain were involved. Massachusetts is rolling country while the northwest is formidably rough and mountainous. Unless a pilot knew how to calculate his altitude, airspeed and power settings against the uneven terrain, he found himself mushing into a mountainsaide or stalling out of an attempted turn.

The pilot fatalities were almost entirely attributed to the pilots' inexperience in contour flying, with the actual causes of the crashes about equally divided between stalls from turns and collisions with objects such as trees. Not one of the pilots who were killed or who had bad accidents had any history of mountain contour flying to his credit.

Experience Disregarded

The specifications for the spray work apparently were drawn up in such a way that no consideration was given the abilities of the pilots to fly that particular type of operation. As far as the forest service and the department of agriculture were concerned, they would accept a bid from anyone who would go low enough in price.

Any crop spraying involves calculated risks. The plane flies low—five to fifty feet for single engine aircraft—and the airspeed must be kept constant to insure even spread of the spray. At the end of a run, the pilot usually takes a heading 45° from his run and then turns back 225° in line for his next run.

If at the same time, he must pull his heavily loaded plane up to clear trees or other obstructions, he is walking the tightrope of a stall. Whether he can loop, do a wheel landing or fly instruments has no importance. What he must know are the exact limits of his plane under varying spray loads, terrain and air-speed-power conditions.

Spray Hazards

In July a pilot spraying in Oregon noticed a crack in a weld in the spray boom. He taped up the leak and tried to finish the job but the weld gave way, so he tried to make it to a field 10 miles away. As he throttled back to land, the exhaust located beneath the plane ignited the spray vapor. He drove in and flattened out in a crash landing with flames torching into the cockpit. CAA representatives are now considering requiring sprayers to have the exhaust placed either beside the fuselage or above it.

Aside from the inflammability of the oil base used in sprays, a major job of education must be done if pilots are to handle chemicals safely, and take proper precautions.

24-D is widely used as a weed killer. Wind conditions must be accurately estimated before spraying with this chemical since at a 20' altitude, a crosswind of five to seven miles per hour can drift spray particles more than a quarter of a mile and it will kill such crops as alfalfa and cotton. Its toxicity on humans is relatively unknown, although a fatal dose would be relatively large, as a rat can take up to ten grains. However, care must be taken and the



HILLER HELICOPTERS equipped with spray booms were used by East Coast Aviation Corp. of Boston (Bodford) Airport to spray for Gypsy Moths. Loading trucks drove to area being sprayed and helicopters were re-loaded in 45 seconds.

LOCAL OPERATIONS



ONE MEIHOD of determining effectiveness of spray is by placing glass slide in the area and counting droplets. Picture shows slide being examined during recent spraying for Gypsy Moth in Massachusetts.

cockpit, clothing and skin washed where it has splashed.

Parathion, put into use after the end of World War II, is another matter. One sixth of a grain, or a goodsized drop, splashed in a pilot's eye is acutely dangerous. Also, minute amounts of infection can build up in the system over a period of time without warning until the limit is reached.

Spray liquid touching the skin can be absorbed, dust can be inhaled, or it can enter the eyes and mouth. If a pilot becomes careless and removes his rubber gloves or recommended full-face gas mask, he is courting death. Unfortunately, one of the first symptoms of infection, impaired vision, could cause a crash. Other symptoms are nausea, diarrhea and convulsions. Collapse may follow. Treatment with atropine pills must be by doctor's prescription.

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Two poisonous chemicals, Aldrin and Dieldrin, coming into general agricultural use, are so poisonous that any small amount on a person's skin could be fatal or cause complete loss of mental faculty and muscular control. They are good products, but they must be used with expert care.

Aside from the danger to the pilot, there is the potential danger of poisoning people who eat the crops and the danger of damaging crops by using the wrong kind of chemical using it carelessly. In California, total of 384 poisonous weed and lant killers are now being used; this does not include insecticides or funcicides.

Crop dusting and spraying operations are under no organized, overall control. Farm bureaus advise on use of chemicals. State agriculture colloges and the Department of Agriculture publish various pamphlets. The Food and Drug Administration has authority to inspect crops traveling in interstate commerce for excess chemical content. CAA requires that pilots have a commercial license and obtain an altitude waiver. And some states have passed laws of varying severity.

Washington requires that aerial application companies employ at least one pilot with a minimum of 1,000 solor hours, of which at least 200 hours must be as pilot applying chemicals from aircraft. It further requires that all pilots engaged in such work have completed a course in aerial crop dusting and spraying, using a curriculum approved by the state director of aeronautics, at a school approved by the director. Some other states vary from having no laws to requiring use of a shoulder harness and fire extinguishers.

The business is growing fast. In June CAA listed 1,274 dusting and spraying operators in the United States, and applications for agricultural waivers totaled over 1,200 in the first six months of 1950 compared with 265 for all of 1949.

Someone should make sure that pilots can cope with the specialized flight problems they will encounter, and that they know the handling precautions and effects on crops of the chemicals they use. A crop duster's rating for pilots, to be validated for local operations by CAA area representatives, might be the answer.

Crop Dusting Bill

Private pilots who have farms may be allowed to dust their own crops. A bill, S.3922, just introduced in Congress, would amend Civil Aeronautics Act, Title 6, to provide that no regulation shall be adopted which would deny a private pilot the right to operate his own plane for dusting or spraying lands which he owns or rents.

CAA bases its present ban on CAR Part 43.60 which states that a private pilot shall not pilot aircraft for hire and adds: "This section permits . . . piloting aircraft in furtherance of a business when the flight is made solely for the personal transportation of the pilot.

A proposed amendment to allow private pilots to dust their own crops also has originated in CAB and is about to come up for Board action. Prospects look good for its passing and obviating the need for Congressional action.



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For Local Operators

Pilot Training

The Air Force's decision to contract for basic flight training of about 1,350 pilot cadets is the first step AF has taken towards using civilian flight training schools since end of World War II. Standby AF bases and civilian flight school facilities are being surveyed now. When sites are selected, specifications will be mailed out by the Contract Relations Section, Procurement Division, Air Materiel Com-

mand, Wright-Patterson AFB, Dayton, Ohio.

In the meantime, the Air ROTC bill to provide longrange peacetime replacements for the Air Force Reserve is under consideration in Congress. If this bill passes, operators located near the 127 colleges having air ROTC units may soon be giving ROTC cadets flight training.

CAA officials and representatives of aviation associations have been conferring on need for a youth flight training program and the form it should take. Something like the pre-war Civilian Pilot Training program may result.

Emergency Role of FBO

Charles Parker, executive director of the National Aviation Trades Association, is working hard to convince CAA, Air Force and Congressional representatives that fixed base operators have an important role in war-time. He is making key men aware of the following functions which he says the local operator, and the operator alone, can provide:

1. Airmen training potential for the military

2. Maintenance facilities for carrying out military work.

A system of airports, many privately owned, which often constitute the only landing facility in an area.

Agricultural crop dusting, seeding, spraying.

An air taxi system which augments the air-

line network.

6. Airport and maintenance facilities for use of company owned aircraft.

Rain-Check on GI Training

Veterans who have started courses, including flight training, under the GI Bill of Rights and interrupt them to go back into the military service will not be bound by the July 25, 1951, cut-off date if they wish to resume their training. However, studies must be resumed within a reasonable time after release from active service and may not extend beyond the wind-up of the GI program July 25, 1956.

The July 25, 1951 cut-off date applies to veterans discharged before July 25, 1947. For the few veterans discharged afterwards, the cut-off date is four years from

The GI Bill will pay dividends if an all-out mobilization results from the Korean conflict. Of about 900,000 in below-college schools, 90,000 are in electronics, including radio, radar and allied lines. Some 110,000 are in mechanical training, including engine maintenance.

ADMA Sales Manual

There was some doubt last month as to whether the aircraft sales manual being prepared by Aviation Distributors and Manufacturers Association would be published. Reason: the Korean situation and uncertain future outlook.

If ADMA goes ahead with its plans to publish the manual, each dealer and operator throughout the country will receive a copy sometime in September. By using it, the dealer can give a prospect a good idea of the advantages of owning a plane in as little as five to ten minutes. The format is planned nine to twelve inches, in two colors, with photographs portraying the role of personal and business aircraft in modern life.

The ideas of experienced aviation businessmen are going into the manual. It is being prepared under the direction of ADMA Public Relations Committee consisting

of George Galipeau, Van Dusen Aircraft Supplies; D. H. Hollowell, Continental Motors; Bob Kenty, Air Associates; O. C. Leighty, Champion Spark Plug Co.; James Riddle, National Aeronautical Corporation; and Ray Snyder, Snyder Division, Air Associates, Chicago.

Fixed Base Operator Census

Since the outbreak of war in Korea, CAA is regretting that it did not carry out its proposed census of fixed base operators. Everyone knows times have been rough and many operators have folded, but no one knows what civil

aviation facilities are available.

CAA area representatives are doing their best now to collect the information and are being helped out by National Aviation Trades Association and state aviation officials. If the facts can be compiled in time for the next meeting of the CAA Aviation Development Advisory Committee slated for August 21, some definite information may be forth-coming concerning the work operators would be expected to do in a war emergency.

Call An Ambulance Plane

More than 350 ambulance aircraft are available to doctors and hospitals throughout the nation, according to the "mercy aircraft" list published by CAA. The planes range in size from Cubs remodeled to carry one stretcher through four-place aircraft capable of carrying two

stretchers and on up to converted C-47's.

The list gives the location and the operator's day and night phone numbers, type of plane, capacity to carry medical personnel and patients, and whether oxygen is available in flight. It is being sent to every county medical society so as to be within reach of the greatest number of doctors, and to a selected list of hospitals and clinics. Base operators might check with hospitals in their locality to make sure they know about it. Copies of this Directory of Ambulance Planes are available from CAA's Office of Aviation Information, Washington, D. C.

• Very Important Pilots get a five-gallon gold piece from C. H. Knupp, manager of Tradewind Airport, zero miles SE of Amarillo, Texas. Instead of saying anything as prosaic as E Pluribus Unum, it says, "Good for five gallons of aircraft fuel." Knupp, who modestly proclaims that, "In Texas, all air trails lead to Tradewind," states as additional enticements for a return-trip that Tradewind Airport is lighted with 24-hour service, a CAA authorized repair station, rental cars and a restaurant.

·Standard Oil of California has put in more airmarkers during the past fiscal year than any state or any other organization or association. It put in 425 airmarkers in the continental United States, five in Alaska and five in Hawaii.

Alabama leads the states for airmarkers reported installed during the first six months of 1950, with a total of

141 airmarkers.

 Southwest Airmotive Co., Love Field. Dallas. has been appointed a Ryan Navion service station and will provide complete "one stop" Navion service. They will offer numerous flat labor rates for engine, accessory, propeller, etc. maintenance and will stock a complete line of Navion parts.

• Standard Oil of California has published a pocket-sized directory of Standard Airport Dealers which covers the seven western states and Alaska. The directory gives the names of the city and airport, distance and direction of the airport from the city, dealer's name and kind of fuel avail-

· A booklet explaining the theory of omnirange radio and how a pilot can use omniranges for cross-country navigation has just been published by the Civil Aeronautics Administration. The explanation and illustrations are clear and the book could well form the basis of a one-hour ground school course. It can be obtained free by writing to the Office of Aviation Information, CAA, Washington 25, D. C.

-BARBARA WARD

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CAA Specification Changes

Luscombe 8 aircraft have been authorized to use Davis silencers Models D-85-90-L and

D-65-75, by Specification A-694.
Piper PA-18 and PA-19 are approved for use of McCauley 1090 metal propeller with Lycoming O-235-C1 engine and for use of Whitaker crop dusting and spraying installations WD-49-18, W-49-105 and DS-50, by Specification 1A2.

Aeronca 7AC is approved for installation of crop sprayer installations Aero King Jr., SA-10 and Martin Sprayer Model B, by Specification A-759.

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Forms close 20 days preceding publication date. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1025 Vermont Ave., N. W., Washington 5, D. C.

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WINGS OF YESTERDAY

25 Years Ago

President Coolidge approved the reappointment of General Mason M. Patrick for an additional four-year term as Chief of Air Service.

On June 13, 1925, Ford Airways, operating an express and freight service between Detroit and Chicago, made its 100th trip without an accident.

A world economic survey of air transportation, the first to be undertaken in this or any other country, was to be conducted jointly by the Department of Commerce and the American Engineering Council.

10 Years Ago

(In American Aviation)

Wright Aeronautical Corp. was granted loans totaling \$92 million to build a new plant near Cincinnati, Ohio, for manufacturing and assembling aircraft en-

British Overseas Airways Corp. began weekly trans-Atlantic service for official passengers and mail.

LETTERS

An Airline Salesman

To the Editor:

In regard to the article, "Airline Salesman—Intriguing But Untrained," (August 1) I would very much appreciate your print-Ing my thoughts on the matter. Although I am sure American Aviation does not care to start a "public forum" on the matter I am equally sure that comments will be re-ceived from afar and will be loud in their praise of the DSM's views.

I am a Sales Representative. At least I like to think of myself as one, but at times

I begin to wonder.
Some years ago I stepped into this work, eager, full of initiative, full of ambition, ready to go to work—and rightfully so. What other industry would take a young

after such a comparatively short period of employment, and offer him the opportunity to get out and really help the company? The chance to really show them what he can do?

Yes, I made 12 calls a day, and more—and enjoyed every minute of it. After two days of help from the boss I was on my own, a trained salesman. After working for three weeks in one building, darting in one office and then another, I had made my-self richer by some 20 or 30 acquaintances, of the nodding variety. Results? Perhaps, but I wonder how many of those potential customers really wanted me to return, when I didn't even have an inkling as to how our present route case was developing or what my company's plans were for expan-

But that becomes a little tiresome after awhile, because you realize those "good deals" you ran into have suddenly become the sole idea of the DSM and he has actually had them in mind for some time. And that continues, the boss taking credit for your work, because you mustn't ever put your signature on a letter. Channels, you know-mustn't step on anyone's toes.

As for company policy, even your contacts realize that you don't get in on the show. The General Sales Manager comes to town and he and your boss retire to the hotel room (with refreshments, of course) to discuss the new "Sales Plan." You aren't asked to join because, what the hell, you're only beating the street, meeting the customers, and couldn't possibly offer any suggestions of value. But the DSM, who spends not less than 75% of his time inside the office, is a wonderful yes-man and can re-turn the following day and tell you to get busy promoting the big deals. You call on top accounts, because someone has to do it, but once a year the big boss comes to town and you are told to "lay off the top accounts" until the DSM has a chance to meet them, and introduce the big boss when he arrives.

New schedules arrive and you deliver them, petty cash bills arrive and you pay them, posters arrive and you distribute them. Every so often the office becomes too dirty to tolerate and you are given the job of cleaning up. Seems to me a pretty high salary to pay a messenger boy and/or porter.

Here is a brief resume of a Sales Representative's duties: Develop new accounts. continue developing your older accounts, make calls on the boss' accounts, run errands, pay bills, keep the office clean, attend all luncheons, and in your spare time, why in 'ell don't you produce a little Air Freight business

You say I'm bitter? Yes, I am. I at one time thought I was a little above-average

when it came to initiative and sales ideas. My company has killed these traits be-cause of their lack of interest in my job. Pay close attention to my next sentence because I say it with absolute honesty and sincerity. Not once in the past two and a half years has my boss or his boss taken the time to ask me how my work was progressing or what I have been doing in behalf of my company!

When the day arrives that the DSM starts giving me credit for my sales efforts and ideas, the company takes me into their confidence regarding company policy, and I am looked upon as an actual working part of our sales force, that is the day that I shall again make 12 calls per day, and be glad to do it.

Win, lose, or draw, I wouldn't trade my job for any on the horizon at this time. It's a wonderful industry and the people ce wonderful.

Say, Joe, what's on at the "Bijou" this afternoon?

AIRLINE SALESMAN

Home & Mother

To the Editor:

Congratulations on Miss Ward's splendid, straight from the shoulder column July 1
AMERICAN AVIATION. (On lack of good lightplane servicing.—Ed.). How about one on
home, mother and lower taxes? Airport operators have too easy a time of it. We are
getting fat and lazy. Her membership card n the Society for Encouragement 'What's-the-Matter-with-Airports' Wr Writers and Shooters of Sitting Ducks is No. 3476.

ROBERT H. HALPIN. Pres., SEWMAWSSD Bethany Airport, Bethany, Conn.

BOOKS

THE SHIPS AND AIRCRAFT OF THE U. S. FLEET, sixth edition, edited and published by James C. Fahey, 2033 Rhode Island Ave., N. E., Washington 18, D. C. 48 pages, il-N. E., Washington 1 lustrated. Price, \$2.

This book is a timely and up-to-the minute compilation of all the ships and planes now operating in the U. S. Navy. The aircraft section lists specifications and performance data of service aircraft and carries illustrations and selected data of the newer plane types. The book also lists detailed information of all of the Navy's aircraft carriers, those in service and those which soon may be. A handy reference for the student of air warfare or for anyone who is just interested in airplanes in gen-

PILOT'S HANDBOOK OF CIVIL AIR REGU-LATIONS, published by Ross Publications, P. O. Box 2092, Arlington 4, Va. Price 35c. An 80-page, 3x6 inch pocket guide for pilots. Includes a full reprint of Parts 20, 29. 43, 60 and 62 of Civil Air Regulations, the parts with which the private flier is most concerned.

TELECOMMUNICATIONS. AERONAUTICAL RECOMMENDED STANDARDS AND PRACTICES. Published by Interational Civil Aviation Organization, International Aviation Bldg., 1080 University St., Mon-treal, Canada. 35c.



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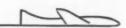
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IN FLIGHT



A PAGE FOR ALL PILOTS

Terrain Stands Out

It even looks like a mountain. Instead of peering through racetracks of hachure lines to read elevations and sort out the highest peaks, pilots can read the information easily on this three-dimensional map. Francis Burr, pilot and commercial artist of New York, developed this method of showing mountains so that they can be read even with dim cockpit lights. Hachure



lines of elevation can be added if desired. Drawback of the method is that it requires a trained hand to do the shading; however, mountains don't move and, once done, changes in navigational information can be added as an overlay. Coast & Geodetic Service and CAA are considering the method for aeronautical charts.

New Glider Pilot Requirements

Applicants for glider ratings are now required to have at least one hour of flight instruction in recovery from stalls, according to CAR Amendment 20-7, effective August 10, 1950. The amendment also establishes a method of computing glider time, by providing that ten short-patterned and released glider flights can be counted as one hour of flight time.

A flight instructor rating for glider pilots is established, with requirements that the applicant be at least 18 years old, hold a commercial pilot certificate or have commensurate experience, pass a theoretical examination, and demonstrate his ability to perform and teach the nacessary flight maneuvers.

F-84 Flight Notes

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In the early stage of the design of the Republic F-94 Thunderjet, a study was made to decide on the advantage of the sharp edged V-front windshield as against the flat front. C. E. Pappas, chief of aerodynamics at R public, recalls that pilots objected strongly to the poor vision of the V-type and that an appreciable drag difference between these two designs occurred only at speeds so high that these drag gains would have been of little benefit. Desirability of improved vision became the most important consideration. A V-type windshield was, however, later incorporated on the inverse taper XF-91

experimental fighter and on the swept-wing version of the F-84, the F-84F (formerly YF-96A).

Another interesting point was that, as the design progressed and the aft CG limit went back, the minimum stick force gradient became smaller and smaller. Where the specification called for a 6 lb./g variation between extremes of flight, the F-84 had 11 lb./g, and the situation was complicated by a destabilizing element of 2.5 lb./g from the tip tanks. A bobweight was therefore incorporated in the controls to make the minimum control force gradient 3 lb./g. Except for large gradients at the forward CG locations and low altitude the bobweight appeared to solve the low stick force gradients.

Security Measure

The new CAA requirements that a foreign applicant for any airman certificate must be a citizen of a friendly foreign government which grants, or has undertaken to grant, reciprocal privileges to U. S. citizens, is a security measure. Previously, pilot licenses were granted to citizens of any friendly foreign country not under the domination of any government with which the United States was at war.

Flying clubs having foreign members already are subject to some requirements. Civil Air Regulations require that the owner of an aircraft be a U. S. citizen in order to have the aircraft registered. If the club is a partnership, all of the members or partners must be U. S. citizens. If it is a corporation, it must be created or organized under the laws of the U. S. or of any U. S. state, territory or possession and the president and two-thirds or more of the board of directors and other managing officers must be U. S. citizens. At least 75% of the voting interests must be owned or controlled by U. S. citizens.

Combating Windstorms

Good advice for combating windstorm losses comes from the Flight Safety Foundation, Inc., N. Y. Adequate tie-downs are essential, but wing "spoilers" can also be effective. The height of the "spoilers" should be at least 2½% of the wing chord and they should be not farther than about 25% back of the leading edge, firmly tied along the wing.

With extremely high winds, the best solution is to fly the planes out of the area, but here is an effective trick for lightplanes: Dig a slit trench in which to slip the fin and rudder and then turn the ships over on their backs, first placing a thick layer of hay or straw on the ground to prevent damage to the top of the wing and fuselage. This has been used in Florida and Okinawa, but it takes plenty of advance warning. And muscle.

Mileage Clock

If you're tired of measuring lines on maps and if flying cross-country you find it hard to figure how many miles you are from where you've been, the new Grimes "Navigator" cockpit instrument makes a good copilot.

It works like a clock. All you have to do is set your ground speed on the instrument and start the built-in timer on takeoff. The Navigator then ticks off the miles for you and at any point along the way you can read the miles you have flown. As long as the mileage and your check points correspond, you are making the set ground speed; sometimes that will take a little adjusting.



Peron and Evita. Last year on the Rickenbacker trip through South America, Captain Eddie tried to get an audience for himself, Arthur Godfrey and others of our party, with El Presidente Peron and the famous Eva Peron, or Evita as everybody calls her. As far as I was concerned (and this went for Godfrey, too), I was much more anxious to see Evita than I was her dictator husband. But a cabinet crisis made an audience impossible so we had to leave Argentina without getting a first-hand look at the pair who rule that country.

When our Braniff inaugural party arrived in Buenos Aires a few months ago we weren't sure whether the Perons would receive us. But Alberto Dodero, the steamship magnate who is close to the Perons and whose agency represents Braniff in Argentina, succeeded in opening the doors. We were given the royal treatment. It was a great show. And I noted with interest that the Perons also received the Pan American



Stratocruiser party a month later. They are trying hard to "be nice" to visiting Norte Americanos.

The appointment with Peron (for only the men in the party) was early in the morning at Casa Rasada, the "pink house" which corresponds to some extent with the White House in Washington in that it houses the executive branch of government. If the building was well guarded there was little evidence, but it is probable that the Argentine police state has the place well covered at all times. The usual number of uniformed aides and guards were around, that's all.

Photo Smiles. We were taken by elevator to an upper floor and ushered through a series of state rooms into a long narrow cabinet room. In front of each seat was a microphone. The photographers set up their equipment and in a matter of minutes the arrival of Peron was announced. In he came,

with flashing smile, and made the rounds shaking hands with each of us. He then seated himself at the center of the long cabinet table with Dodero on one side and Tom Braniff on the other. Peron speaks no English so Dodero did the interpreting.

Rarely have I seen so many photographs taken and Peron mugged for each one. His smile is full and his teeth (not all of them are the originals)



flash white. But I noted that his face was slightly flushed and he has a tendency for jowls. He wasn't quite as physically trim as I had expected.

For an hour the pleasantries went back and forth in two languages. great many nice things were said but after it was all over one could hardly remember anything specific. Peron said he welcomed tourists from the USA and Tom Braniff said he'd carry them But nothing was said about down. Peron's tirades against Wall Street and the "imperialistic USA." Nothing was said about the Argentine police state, about press censorship, or about the rotting economy of what was once a prosperous nation. One just doesn't bring up such unpleasant subjects on those occasions.

Affable. A rather handsome man and a former Army officer who came up through the ranks to grab off the top political spot, Peron made a very determined effort to be the affable, generous host. The transportation and other facilities of the country were available to us. We were most welcome now and he wanted us to return. But despite his efforts to make a good impression on our party (which included some prominent U. S. bankers), Peron hardly seemed the type of man to have a sufficient background to rule an important country in all of its economic and political aspects. But who am I to judge?

When the hour's visit was ended, Peron shook hands all around again, and his aides loaded us up with books and booklets on Peron's social and political philosophies.

Eva Peron was up country that day attending a funeral of a prominent Peronista but she returned to Buenos Aires next morning and we were alerted to be ready for an audience with her at 5 o'clock. So we piled into the limousines and went to her offices in the Labor Department. At first we waited in a large and elaborately-decorated state room, then were taken into her office which turned out to be quite small and cluttered up with paintings, placques, trophies and scrolls, all pertaining to her or to her and her husband. It was an hour before she arrived, but the arrival of Evita comes with a fast flourish.

Nervous Hands. Evita is petite. She was trimly dressed in a small-checked black and white suit. Her blond hair was carefully brushed back and a knot hung down in the back. She had on no make-up except rouge on her lips and wore only a few pieces of simple costume jewelry. She wrong her hands nervously but spread on the charm thickly.

She made the rounds of the room, shaking hands with everyone. Then tea and mate, (pronounced mahtay) the latter a tea made from "yerbe mate" grown in northeastern Argentina, were served.

Being normally skeptical, I had expected to find a woman whose youthful bloom had somewhat faded. I expected on close view to find wrinkles and coarse skin. But Evita's features are excellent, her figure is trim, and she is everything in the way of a tempestuous, temperamental and beautiful female that the advance billing had said she would be. She walked about three paces to shake hands with me and I must say that the combination of those penetrating brown eyes and smile just about melted me on the spot. In other words, she's a helluva good looking dame and I was interested to note that almost without



exception the women in our party (who might have been critically catty) were high in their praise of her—as a female specimen.

There is no doubt about Evita's power in Argentina. She is the real boss. She orders government officials around like servants. She operates on whims. She is subjective like all females, which makes for extremely poor government. Cross her and you'll get plenty of fireworks. She has made her mark in history, no doubt of that, but it has been an unfortunate ascendence to power for Argentina. It's no way to run any country.

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